

APPENDIX C
Air Quality Technical Report



Air Quality Technical Report
Agua Hedionda South Shore
Specific Plan for 85% Open Space
and 15% Retail
Carlsbad, California

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Acronyms and Abbreviations

Acronym	Definition
CAAQS	California Ambient Air Quality Standards
CalEEMod™	California Emissions Estimator Model
CARB	California Air Resources Board
C-C	Commercial-customer
C-NW	Commercial-nonwork
CO	Carbon Monoxide
DEIR	Draft Environmental Impact Report
DPM	diesel particulate matter
EMFAC	EMission FACtors model
ENVIRON	ENVIRON International Corporation
EPFs	Environmental Protection Features
GHG	greenhouse gas
lb	Pound
NAAQS	National Ambient Air Quality Standards
NO _x	Oxides of Nitrogen
OFFROAD	Off-road Emissions Inventory Program model
PM	Particulate Matter
PM ₁₀	Particulates 10 Microns or Smaller
PM _{2.5}	Particulates 2.5 Microns or Smaller
RAQS	Regional Air Quality Strategy
ROGs	reactive organic gases
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SO ₂	Sulfur Dioxide
TACs	Toxic Air Contaminants
TDM	Transportation Demand Management
USEPA	United States Environmental Protection Agency
VMT	vehicle miles travelled
VOC	Volatile Organic Compound

Executive Summary

The Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail (Agua Hedionda 85/15 Specific Plan or Specific Plan) is comprised of approximately 203.4 acres of land between the south shore of the Agua Hedionda Lagoon and Cannon Road in the City of Carlsbad, California. The Specific Plan will permanently protect and conserve approximately 176.7 acres for open space, the continuation of strawberry farming and coastal agricultural (more than 85% of the Specific Plan area), and will reserve approximately 26.7 acres (less than 15% of the Specific Plan area) for a new pedestrian-friendly visitor serving outdoor retail, shopping, dining and entertainment promenade, all at no tax burden to the residents of Carlsbad. The Specific Plan requires that the open space lands be improved with low impact public access by providing passive recreation amenities including miles of new nature trails and walkways, picnic and rest areas, lagoon vistas, an outdoor classroom, parking and an integrated resource and educational signage program. The Outdoor Shopping, Dining and Entertainment Promenade, together with supporting uses including a farm-to-table restaurant and farm stand will provide for a total of approximately 585,000 square feet of visitor serving uses within the Specific Plan. The implementation of the Specific Plan is anticipated to occur between 2017 and 2019. This report has been prepared consistent with the Specific Plan. This Executive Summary includes a short description of the analysis scope and methodology and the results of the analysis to assess criteria air pollutant emissions due to the Specific Plan.

The Specific Plan will result in emissions of criteria pollutants, such as nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds, sulfur oxides, and particulate matter (PM) of aerodynamic radius less than 10 micrometers (PM_{10}) or less than 2.5 micrometers ($\text{PM}_{2.5}$). This report provides an inventory surveying the emissions that would result from the Specific Plan.

The California Emission Estimator Model (CalEEMod™) version 2013.2.2 program and other methods based on the regulatory and scientific literature were used to estimate criteria pollutant emissions for both construction and operation of the Specific Plan. Air dispersion modeling of construction emissions was performed using methods recommended by regulatory agencies, including the United States Environmental Protection Agency (USEPA), California Air Resources Board (CARB), and San Diego Air Pollution Control District (SDAPCD). The Specific Plan operational emissions were analyzed based on the full build-out in the year 2019.

For construction, the mass daily criteria pollutant emissions are less than the significance criteria for NO_x , CO, Sulfur Dioxide (SO_2), PM_{10} , and $\text{PM}_{2.5}$, and greater than the significance criterion for volatile organic compound (VOC) as shown in **Table ES-1**. The VOC emissions are primarily due to emissions from architectural coatings. The Specific Plan will comply with SDAPCD Rules and Regulations that require the use of low VOC containing coatings to minimize the potential VOC emissions.

The evaluation of the Specific Plan construction activities on ambient air quality shows that the Specific Plan construction emissions would not result in an exceedance of National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for all pollutants currently in attainment, as shown in **Table ES-2**. For PM_{10} and $\text{PM}_{2.5}$, the San Diego

Air Basin is in nonattainment, where background concentrations already exceed the NAAQS and CAAQS. Therefore, to further assess the Specific Plan's impact for these pollutants, the results are compared to the South Coast Air Quality Management District's (SCAQMD) incremental significance criteria, as the SDAPCD has not issued comparable criteria. The Specific Plan construction modeling results are below these criteria.

For operational emissions, the mass daily criteria pollutant emissions are less than the significance criteria for SO₂ and greater than the significance criteria for VOC, NO_x, CO, PM₁₀ and PM_{2.5}, as shown in **Table ES-3**. The primary source of the operational emissions is the traffic-related mobile sources. The emissions from traffic-related mobile sources are expected to decline in the future, as vehicles are required to become more fuel efficient due to existing regulations (e.g., Pavley Standard and the Advanced Clean Cars program). The VOC emissions are primarily due to traffic-related mobile sources and consumer product usage that are expected to be used by workers and customers.

Table ES-1. Summary of Maximum Daily Criteria Air Pollutant Construction Emissions

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Source Location	Source Type	VOC	NO _x	CO	SO ₂	PM ₁₀ ¹	PM _{2.5} ¹
		lb/day					
Onsite		1,077	70	18	0.03	3	8
Offsite	Worker	0.56	0.08	39.82	0.10	8.08	0.04
	Vendor	0.00	0.00	57.43	0.10	2.69	0.00
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total²		1,078	70	115	0.2	14	8
Significance Criteria ³		137	250	550	250	100	55
Above Criteria		YES	NO	NO	NO	NO	NO

Notes:

¹ PM emissions include exhaust PM and fugitive dust emissions.

² The maximum emissions reported for each pollutant may occur on different days. The sum of the emissions may not add up due to rounding.

³ Air quality screening Criteria follow those published in the Draft Program Environmental Impact Report for the Carlsbad General Plan Update. See Table 3.2.5. Available at: <http://www.carlsbadca.gov/services/depts/planning/update/documents.asp>. Accessed: March, 2015.

Abbreviations:

VOC - volatile organic compounds

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - particulate matter

PM_{2.5} - particulate matter

lb - pounds

Table ES-2. Estimated Air Quality Construction Impacts

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Specific Plan ¹								
Pollutant	Averaging Time	Maximum Incremental Impact (µg/m ³)	Background Pollutant Concentration ² (µg/m ³)	Maximum Specific Plan + Background Concentration (µg/m ³)	CAAQS Criteria (µg/m ³)	Above Criteria?	NAAQS Criteria (µg/m ³)	Above Criteria?
NO ₂ ³	1-hour	10.03	152	162	339	No	188	No
	1-hour Fed.	10.03	94	104	--	--	188	No
	Annual	1.00	13	14	57	No	100	No
CO	1-hour	27.67	5,041	5,068	23,000	No	40,000	No
	8-hour	27.67	4,353	4,381	10,000	No	10,000	No
PM ₁₀ ⁴	24-hour	3.38	80	83	50.0	Yes	150.0	No
	Annual	0.27	23.1	23	20.0	Yes	--	--
PM _{2.5} ⁴	24-hour	1.81	71	73	--	--	35.0	Yes
	Annual	0.15	10.5	11	12.0	No	12.0	No

Notes:

¹ Annual concentrations are estimated using an adjustment ratio to estimate annual concentrations from 1-hour concentrations based on USEPA guidance.

² Background values obtained from the Camp Pendleton air monitor station for years 2011 - 2013. When data was not available, data was obtained from Escondido and then the El Cajon stations.

³ Impacts from CalEEMod™ are reported as NO_x. The analysis assumes a 80% of NO_x to NO₂ for 1-hour criterion, and a 75% conversion for the annual criterion per USEPA guidance.

⁴ Since the background concentrations exceed the CAAQS and/or NAAQS, the results are also compared to the SCAQMD incremental criteria for PM₁₀ and PM_{2.5}, which are 10.4 mg/m³ and 1.0 µg/m³ for the 24-hour and annual averaging times, respectively. (note that a criterion does not exist for the PM_{2.5} annual standard, thus, the PM₁₀ annual criterion was used).

Abbreviations:

µg/m³ - micrograms per cubic meter

mg/m³ -

CAAQS - California Ambient Air Quality Standards

NAAQS - National Ambient Air Quality Standards

NO₂ - Nitrous oxide

CO - carbon monoxide

PM₁₀ - particulate matter

PM_{2.5} - particulate matter

NO_x - nitrogen oxides

USEPA - United States Environmental Protection Agency

SCAQMD - South Coast Air Quality Management District

CalEEMod - CALifornia Emissions Estimator MODEL

Reference:

USEPA, Memorandum on Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO₂, National Ambient Air Quality Standard, March 2011. Available at: http://www.epa.gov/region07/air/nsr/nsrmemos/appwno2_2.pdf. Accessed: March 2015.

USEPA, 40 CFR Part 51 Appendix W, 2011. Available at: <http://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol2/pdf/CFR-2011-title40-vol2-part51-appW.pdf>. Accessed: March 2015.

California Air Resources Board, Ambient Air Quality Standards, 2013. Available at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed: March 2015.

Table ES-3. Summary of Operational Criteria Air Pollutant Emissions

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Source ¹	VOC ²	NO _x	CO	SO ₂ ³	PM ₁₀	PM _{2.5}
	(lb/day)					
Area	279.5	0.0	0.8	0.0	0.0	0.0
Energy ⁴	0.1	0.7	0.6	0.0	0.1	0.1
Traffic	101.5	249.5	1,106.4	3.1	215.9	59.9
Total	381	250	1,108	3	216	60
SDAPCD Criteria⁵	137	250	550	250	100	55
Above Criteria?	Yes	Yes	Yes	No	Yes	Yes

Notes:

¹ All operational categories are presented in greater detail in the supporting tables. Emissions reported as zero are considered below the reporting level of CalEEModTM and not necessarily equal to zero.

² ROG as defined by CalEEModTM is assumed to be equal to VOC as defined by SDAPCD.

³ CalEEModTM reported SO₂ emissions are assumed to represent SO_x emissions.

⁴ Energy emissions include natural gas use by buildings.

⁵ Air quality screening criteria follow those published in the Draft Program Environmental Impact Report for the Carlsbad General Plan Update. See Table 3.2.5. Available at: <http://www.carlsbadca.gov/services/depts/planning/update/documents.asp>. Accessed: March 2015.

Abbreviations:

VOC - volatile organic compounds

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - coarse particulate matter

PM_{2.5} - fine particulate matter

lbs - pounds

ROG - reactive organic gases

CalEEMod - CALifornia Emissions Estimator MODel

SDAPCD - San Diego Air Pollution Control District

1 Introduction

The purpose of this technical report is to present the quantitative analyses that were used to evaluate air quality emissions for the Specific Plan. Emissions during both construction and operations of the Specific Plan were quantified. In addition, air dispersion modeling of construction emissions was performed, and the results were used to evaluate ambient air impacts from construction of the Specific Plan.

1.1 Specific Plan Description

The Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail (Agua Hedionda 85/15 Specific Plan or Specific Plan) is comprised of approximately 203.4 acres of land between the south shore of the Agua Hedionda Lagoon and Cannon Road in the City of Carlsbad, California. The Specific Plan will permanently protect and conserve approximately 176.7 acres for open space, the continuation of strawberry farming and coastal agricultural (more than 85% of the Specific Plan area), and will reserve approximately 26.7 acres (less than 15% of the Specific Plan area) for a new pedestrian-friendly visitor serving outdoor retail, shopping, dining and entertainment promenade, all at no tax burden to the residents of Carlsbad. The Specific Plan requires that the open space lands be improved with low impact public access by providing passive recreation amenities including miles of new nature trails and walkways, picnic and rest areas, lagoon vistas, an outdoor classroom, parking and an integrated resource and educational signage program. The Outdoor Shopping, Dining and Entertainment Promenade, together with supporting uses including a farm-to-table restaurant and farm stand will provide for a total of approximately 585,000 square feet of visitor serving uses within the Specific Plan. The implementation of the Specific Plan is anticipated to occur between 2017 and 2019. This report has been prepared consistent with the Specific Plan. **Table 1** summarizes the land uses for the Specific Plan.

Analysis of the Specific Plan's air quality emissions incorporates the following regulatory measures:

Regulatory Measures

- Compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 regarding fugitive dust. The construction emission estimates include a fugitive dust control factor for watering, which is expected to ensure the Specific Plan is in compliance with SDAPCD Rule 55.
- Compliance with SDAPCD Rule 67 regarding Architectural Coatings. This rule limits the volatile organic compound (VOC) content of architectural coatings used in the SDAPCD jurisdiction (i.e., San Diego County). The rule provides various standards for the coating category. California Emission Estimator Model (CalEEMod™) includes assumptions regarding the requirements of SDAPCD Rule 67 (amended December 12, 2001).¹
- The buildings will meet the California Energy Commission's 2013 building energy efficiency standards, as set forth in Title 24, part 6, of the California Code of Regulations code.

¹ Available at: <http://www.sdapcd.org/rules/Reg4pdf/R67-0.pdf>. Accessed: March 2015.

Environmental Protection Features (EPFs)

- **EPF AQ-1** The Specific Plan Proponent shall request that SDACPD revise the RAQS to include the development projections of the proposed Specific Plan in the SDAPCD's next triennial update to the RAQS.
- **EPF AQ-2** The Specific Plan Proponent shall control fugitive dust by watering areas of the construction site with the potential to generate fugitive dust emissions twice a day.
- **EPF AQ-3** The Specific Plan Proponent shall design the commercial retail structures to adhere to the Leadership in Energy and Environmental Design (LEED) Gold Core and Shell Design Standards.
- **EPF AQ-4** The Specific Plan's nonresidential structures shall exceed the 2013 Title 24 Building Energy Efficiency Standards by 5% (California Code of Regulations, Title 24, Part 6). In the event that an update to the 2013 Standards becomes effective before building permits are secured and that update achieves greater than a 5% improvement in energy efficiency relative to the 2013 Standards, the Specific Plan will comply with the then-effective and applicable building standards.
- **EPF AQ-5** The Specific Plan will require the commercial retail structures to utilize a computer-based energy management system capable of reducing and optimizing operational energy consumption. The energy management system will be designed to provide automated control and monitoring of the Specific Plan's energy consumption from heating, air conditioning, ventilation and lighting. The data obtained from the energy management system then will be used by the Specific Plan Proponent and individual commercial tenants to perform self-diagnostic and optimization routines at regularly-scheduled intervals, and prepare trend analysis and consumption forecasts, thereby facilitating enhancements to the efficiency of energy consumption.
- **EPF AQ-6** The Specific Plan design shall include photovoltaic panels to cover a minimum of 60% of the parking structure roof.
- **EPF AQ-7** The Specific Plan shall require:
 - The use of Energy Star appliances, where available, by the commercial tenants;
 - The installation of high-efficiency interior and exterior lighting; and,
 - The implementation of water conservation measures, such as using recycled water for outdoor irrigation, and installing dual-flush toilets, waterless urinals, and self-closing faucets.
- **EPF AQ-8** The Specific Plan shall require the installation of six electric vehicle charging stations and provide preferential parking locations for electric vehicles.
- **EPF AQ-9** The Specific Plan shall require the installation of electronic parking availability signage to facilitate the smooth and efficient movement of vehicles.
- **EPF AQ-10** The Specific Plan Proponent shall develop a Green Cleaning Product education program to be made available to commercial tenants. The education program shall consist of:
 1. Provision of educational materials on low VOC consumer products.

2. Educational materials addressing the use of detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn and garden products; disinfectants; sanitizers; aerosol paints; automotive specialty products; low VOC paints and architectural coatings; and low emission landscape equipment.
 3. Educational materials on the importance of recycling and purchasing recycled material.
- **EPF AQ-11** To minimize idling time and combustion of vehicle fuels, the Specific Plan Proponent shall ensure that any commercial building that utilizes large-scale refrigerated storage (e.g., restaurant; grocery store) equips each loading dock with an electrical hook-up to power refrigerated trucks.
 - **EPF AQ-12** To minimize fuel combustion, all landscaped areas associated with the Specific Plan's commercial land uses shall be landscaped and maintained with electrical equipment, to the extent feasible.
 - **EPF AQ-13** The Specific Plan shall implement traffic-related design elements and EPFs to reduce Specific Plan-related traffic effects and transportation demand.

1.2 Existing Conditions

The Specific Plan area encompasses conservation and improvements associated with approximately 203.4 acres of land situated between the south shore of the inner Agua Hedionda Lagoon and Cannon Road. The land area covered by the Specific Plan was originally under the ownership of San Diego Gas & Electric and part of its Encina Power Station land holdings, whose 400-foot exhaust stack and power plant and transmission facilities have been a city landmark near the edge of the ocean and Agua Hedionda Lagoon since the mid-1950s. The land is comprised of two separate parcels, identified as San Diego County's Assessor Parcel Nos. 211-010-024, and 211-010-031.

2 Significance Criteria

This analysis will identify a significant impact if the Specific Plan would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative criteria for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and
- Create objectionable odors affecting a substantial number of people.

In order to help assess the Specific Plan relative to these guidelines, this analysis will rely upon the significance criteria identified in the Draft Environmental Impact Report (DEIR) for the City of Carlsbad's draft General Plan update.² The City of Carlsbad identified significance criteria based on SDAPCD Rule 20.2. While Rule 20.2 is specifically related to New Source Review for Non-Major Stationary Sources as part of the SDAPCD permitting process and this Specific Plan does not require such permits, the SDAPCD has not provided specific criteria for determining significance of commercial developments. The City of Carlsbad's DEIR air quality criteria are shown in **Table 2**.

² City of Carlsbad, 2015. Draft General Plan and Draft Climate Action Plan Draft Environmental Impact Report. March. Available at: <http://www.carlsbadca.gov/services/depts/planning/update/documents.asp>. Accessed: March 2015.

3 Criteria Pollutant Emission Inventories

This section describes the methodology that ENVIRON International Corporation (ENVIRON) used to develop the criteria pollutant emissions inventories associated with the Specific Plan, which include construction and operational emissions. Sub-categories of the operational emissions include area sources, energy use, and mobile sources.

3.1 Methodology for Calculating Mass Emissions

This analysis focuses on the potential change in air quality due to implementation of the Specific Plan. The Specific Plan would result in criteria pollutant emissions from construction and operational sources. Construction activities would generate emissions at the site from off-road construction equipment, and on roadways resulting from construction-related truck hauling, vendor deliveries, and worker commuting. Operational activities would also generate emissions at the Specific Plan site from miscellaneous onsite sources, such as natural gas combustion for cooking and comfort heating and landscaping equipment, and offsite from operational-related traffic.

To estimate the criteria pollutant emissions from the Specific Plan, ENVIRON directly or indirectly relied primarily on emissions estimation guidance from government-sponsored organizations, energy surveys by other consulting firms, Specific Plan specific resource management studies (e.g., traffic study), and emission estimation software.

CalEEMod™

ENVIRON primarily utilized the CalEEMod™ version 2013.2.2³ to assist in quantifying the criteria pollutant emissions in the inventories presented in this report for the Specific Plan. CalEEMod™ is a statewide program designed to calculate both criteria and greenhouse gas (GHG) emissions from development projects in California. This model was developed under the auspices of the South Coast Air Quality Management District (SCAQMD) and received input from other California air districts, and is currently supported by several lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review. CalEEMod™ utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors,⁴ California Air Resources Board's (CARB's) on-road and off-road equipment emission models such as the Emission FACTor model (EMFAC) and the Off-road Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission and California Department of Resources Recycling and Recovery.

³ SCAQMD, 2013, California Emissions Estimator Model. Available at: <http://www.caleemod.com/>. Accessed: March 2015.

⁴ The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. Available at: <http://epa.gov/ttnchie1/ap42/>. Accessed: March 2015.

CalEEMod™ is based upon CARB-approved Off-Road and On-Road Mobile-Source Emission Factor models, and is designed to estimate construction and operational emissions for land use development projects and allows for the input of project specific information. OFFROAD⁵ is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment). EMFAC⁶ is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles, haul trucks).

CalEEMod™ provides a simple platform to calculate both construction and operational emissions from a land use project. It calculates both the daily maximum and annual average for criteria pollutants as well as total or annual GHG emissions. Specifically the model aids the user in the following calculations:

- Short term construction emissions associated with demolition, site preparation, grading, building, coating, and paving from off-road construction equipment, on-road mobile equipment associated with workers, vendors, and hauling, and fugitive dust associated with grading, demolition, truck loading, and roads, and volatile emissions of reactive organic gases (ROGs) from architectural coating and paving. Fugitive dust from windblown sources such as storage piles are not quantified in CalEEMod™, which is consistent with approaches taken in other comprehensive models.
- Operational emissions associated with the fully built out land use development, such as on-road mobile vehicle traffic generated by the land uses, fugitive dust associated with roads, volatile emissions of ROGs from architectural coating, off-road emissions from landscaping equipment, volatile emissions of ROGs from consumer products and cleaning supplies, wood stoves and hearth usage, and natural gas usage in the buildings.

In addition, CalEEMod™ contains default values and existing regulation methodologies to use in each specific local air district regions. Appropriate statewide default values can be utilized if regional default values are not defined. ENVIRON used default factors for San Diego County that is within the SDAPCD jurisdiction for the emission inventory, unless otherwise noted in the methodology descriptions below. Details regarding the specific methodologies used by CalEEMod™ can be found in the CalEEMod™ User's Guide and associated appendices.⁷ The CalEEMod™ output files are provided for reference in Appendix A to this report.

3.2 Construction Emissions

This section describes the estimation of emissions from construction activities at the Specific Plan Site. The major construction phases included in this analysis are:

- Demolition: involves tearing down of buildings or structures.
- Site Preparation: involves clearing vegetation (grubbing and tree/stump removal) and stoness prior to grading.

⁵ CARB, 2013. OFFROAD Motor Vehicles – OFFROAD2011 Available at: <http://www.arb.ca.gov/msei/categories.htm>. Accessed: March 2015.

⁶ CARB, 2013. ONROAD Motor Vehicles – EMFAC2011 Available at: <http://www.arb.ca.gov/msei/categories.htm>. Accessed: March 2015.

⁷ SCAQMD, 2013, California Emissions Estimator Model User's Guide. Version 2013.2.2. Available at: <http://www.caleemod.com/>. Accessed: March 2015.

- Grading: involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- Building Construction: involves the construction of structures and buildings.
- Architectural Coating: involves the application of coatings to both the interior and exterior of buildings or structures.
- Paving: involves the laying of concrete or asphalt such as in parking lots or roads.

Emissions from these construction phases are largely attributable to fuel use from construction equipment and worker commuting.

Construction-related emissions of ROGs, nitrogen oxides (NO_x), carbon monoxide (CO), particulates 10 microns or smaller (PM₁₀), and particulates 2.5 microns or smaller (PM_{2.5}) were estimated using CalEEMod™. PM emissions are composed of exhaust emissions and fugitive emissions. Exhaust emissions are typically given out by a combustion engine of on-road vehicles and/or off-road equipment. Fugitive emissions are PM dust suspended in the air by wind action and construction related activities. Default onsite equipment lists in CalEEMod™ supplemented with Specific Plan specific modifications were used for the various construction phases. CalEEMod™ default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths.

ENVIRON was provided with a construction schedule and relied upon CalEEMod™ defaults to estimate numbers and types of equipment that will be used in the construction of the Specific Plan. The emission calculations are intended to estimate maximum daily emissions. Each piece of equipment was assumed to operate based on CalEEMod™ default assumptions (i.e., load factor and operational hours). The construction will commence in 2017 and is anticipated to be completed in 2019. The construction land use acreages, schedule and equipment lists, and grading information are shown in **Tables 3 through 6**, respectively. Construction emissions are estimated assuming one shift working 8 hours per day, for five days in a week. The CalEEMod™ output files are included in Appendix A.

3.2.1 Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the assumptions summarized above. The fugitive emissions from off-road equipment performing work are also included in this analysis.

Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod™ assumes all of the equipment operates on diesel fuel. The CalEEMod™ default assumptions based on SCAQMD construction surveys are used to estimate default equipment lists based on total project acreage as calculated from the acreage entered on the land use screen. If the acreage is in between the acreage in the survey, the next highest acreage tier is used. The calculations associated with this screen include the running exhaust emissions from off-road equipment. Since the equipment is assumed to be diesel, there are no starting or evaporative emissions associated with the equipment as these are de minimis

for diesel-fueled equipment. CalEEMod™ calculates the exhaust emissions based on CARB's OFFROAD2011 methodology using the equation presented below.⁸

$$Emissions_{Diesel} = \sum_i (EF_i \times Pop_i \times AvgHP_i \times Load_i \times Activity_i)$$

Where:

EF = Emission factor in grams per horsepower-hour (g/bhp-hr) as processed from OFFROAD2011

Pop = Population, or the number of pieces of equipment

AvgHp = Maximum rated average horsepower

Load = Load factor

Activity = Hours of operation

i = equipment type

CalEEMod™ was also used to calculate fugitive dust associated with the construction phases. The fugitive dust emissions from the construction phases are calculated using the default CalEEMod™ methodology, which is described in USEPA AP-42, and PM₁₀ and PM_{2.5} emissions from onsite fugitive dust, will be controlled by watering. The analysis also incorporates the Specific Plan's commitment to greater fugitive dust control (i.e., watering two times a day).

The emissions associated with off-road construction equipment are shown in **Table 7**. The maximum daily emissions typically occur during the grading and building construction phases.

3.2.2 Emissions from On-Road Trips

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker and vendor commuting, and trucks for soil and material hauling. These emissions are based on the number of trips and vehicle miles traveled (VMT) along with emission factors from EMFAC2011.

Running emissions for all pollutants and PM emissions from tire and brake wear were divided by the VMT of each respective vehicle class from each scenario year and adjusted for unit conversions to derive emission factors in units of grams per VMT. All other emissions (including evaporative) were divided by the number of trips to derive emission factors in units of grams per trip.

The emissions from mobile sources were calculated with the trip rates, trip lengths, and emission factors for running from EMFAC2011 as follows.⁹

$$Emissions_{\text{pollutant}} = VMT * EF_{\text{running, pollutant}}$$

⁸ SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, pages 5-6. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

⁹ SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, pages 13-14. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

Where:

Emissions_{pollutant} = emissions from vehicle running for each pollutant

VMT = vehicle miles traveled

EF_{running, pollutant} = emission factor for running emissions

Evaporative emissions, starting and idling emissions are multiplied by the number of trips times the respective emission factor for each pollutant.

CalEEMod™ was also used to calculate on-road fugitive dust associated with paved and unpaved roads consistent with the method discussed in the traffic section. The vehicle miles traveled from worker commuting, vendor commutes, soil hauling, and demolition hauling are accounted for.

The emissions associated with on-road activities are shown in **Table 8**.

3.2.3 Emissions from Architectural Coating

VOC or ROG off-gassing emissions result from evaporation of solvents contained in surface coatings. The program calculates the VOC evaporative emissions from application of non-residential surface coatings using the following equation.¹⁰

$$E_{AC} = EF_{AC} \times F \times A_{\text{paint}}$$

Where:

E = emissions (pound (lb) VOC)

EF = emission factor (lb/square foot (sq. ft.))

A = building surface area (sq. ft.). The total surface for painting was assumed to equal 2 times that for nonresidential square footage. All of the land use information provided by a metric other than square footage was converted to square footage using the default conversions or user defined equivalence.

F = fraction of surface area. The default values, based on CalEEMod™ defaults used in their coating rules, are 75% for the exterior surface and 25% for the interior.

The emission factor (EF) is based on the VOC content of the surface coatings and is calculated estimated using the equation below:

$$EF_{AC} = C_{VOC}/454(\text{g/lb}) \times 3.785(\text{L/gal})/180(\text{sq. ft.})$$

Where:

EF = emission factor (lb/sq. ft.)

C = VOC content gram per liter

The emission factors for coating categories were calculated using the equation above based on default VOC content from provided by the air districts or CARB's statewide limits in

¹⁰ SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, page 16. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

CalEEMod™. The emissions associated with architectural coating are included as a part of onsite construction emissions as shown in **Table 9**.

3.2.4 Emissions from Paving

While there is no specific screen associated with asphalt paving emissions, CalEEMod™ estimates VOC off-gassing emissions associated with asphalt paving of parking lots using the following equation.¹¹

$$E_{AP} = EF_{AP} \times A_{\text{parking}}$$

Where:

E = emissions (lb)

EF = emission factor (lb/acre). The Sacramento Metropolitan Air Quality Management District default emission factor is 2.62 lb/acre

A = area of the parking lot (acre)

The VOC off-gassing emissions associated with paving are included as a part of onsite construction emissions as shown in **Table 9**.

3.2.5 Construction Emissions Results

Since construction phases may or may not overlap in time, the maximum daily construction emissions will not necessarily be the sum of all possible daily emissions. CalEEMod™ therefore calculates the maximum daily emissions for each construction phase. The program will then add together the maximum daily emissions for each construction phase that overlaps in time. Finally, the program will report the highest of these combined overlapping phases as a daily maximum. For fugitive dust calculations during grading, the maximum amount of acres graded in a day is determined by the number of grading equipment. The emissions estimated due to construction of the Specific Plan are summarized in **Table 10**. The estimated emissions show that the regional daily emissions for construction are less than the significance criteria for NO_x, CO, Sulfur Dioxide (SO₂), PM₁₀, and PM_{2.5}, and greater than the mass daily significance criterion for VOC.

The construction emission estimates are assumed to conservatively represent the maximum emissions for the Specific Plan. The Specific Plan will comply with SDAPCD Rules and Regulations that require the use of low VOC containing coatings to minimize the potential VOC emissions.

3.3 Operational Emissions

The criteria air pollutant operational mass emissions of ROG_s, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} were estimated using CalEEMod™. The CalEEMod™ output can be found in Appendix A. The source categories considered include area sources, natural gas energy use, and mobile sources.

¹¹ SCAQMD, 2013, California Emissions Estimator Model User's Guide, Appendix A, page 17. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

3.3.1 Area Sources

Area sources are those emissions that are generally too small to be uniquely identified as point sources, and are thus generally aggregated as a group. CalEEMod™ estimates emissions for the following sources, which are included under the category of “area” sources: landscaping equipment (e.g., lawn mowers), hearths, consumer products, and architectural coatings. Criteria pollutant emissions due to natural gas combustion in buildings, except for hearths, could also be considered area sources, but are reported by CalEEMod™ in the emissions associated with building energy use (described below). The criteria pollutant emissions generated by the Specific Plan were calculated using CalEEMod™ defaults, based upon the land uses that will be included in each project.

3.3.1.1 Consumer Products

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. CalEEMod™ based its assumptions on a SCAQMD evaluation of consumer product use compared to the total square footage of buildings using data from CARB’s consumer product emissions inventory. To calculate the VOC emissions from consumer product use, the following equation was used in CalEEMod™.¹²

$$\text{Emissions} = \text{EF} \times \text{Building Area}$$

Where:

EF = pounds of VOC per building square foot per day

The factor is 1.98×10^{-5} lbs/sq. ft./day for

Building Area = The total square footage of all buildings

3.3.1.2 Architectural Coatings

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. The operational emission methodology from architecture coating is the same as the construction. All land use buildings are assumed to be repainted at a rate of 10% of area per year. This is based on the assumptions used by CalEEMod™.

3.3.1.3 Estimated Emissions from Area Sources

The Specific Plan was estimated to result in the emissions as shown in **Table 11**. The primary source of VOC (or ROG) emissions is due to consumer products, and the primary source of NO_x, CO, PM₁₀, and PM_{2.5} emissions is due to the landscaping equipment.

3.3.2 Building Energy Use

Criteria pollutants are emitted as a result of activities in buildings for which natural gas is typically used as an energy source. Combustion of any type of fuel emits criteria pollutants directly into the atmosphere; when this occurs in a building, this is a direct emission source

¹² SCAQMD, 2011, California Emissions Estimator Model User’s Guide, Appendix A, pages 27-28. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

associated with that building. Unless otherwise noted, CalEEMod™ default parameters were used. Climate zone 13, which best represents San Diego County, was selected based on the CalEEMod™ forecast climate zone map. The estimated emissions also reflect the requirement that new buildings meet the 2013 Title 24 part 6 building code as a conservative estimate.

Table 12 summarizes the total natural gas use, and total criteria pollutant emissions for Specific Plan.

3.3.3 Mobile Source Emissions

The emissions associated with on-road mobile sources are generated from residents, workers, customers, and delivery vehicles visiting the land use types in the project. The emissions associated with on-road mobile sources includes running and starting exhaust emissions, evaporative emissions, brake and tire wear, and fugitive dust from paved and unpaved roads. Starting and evaporative emissions are associated with the number of starts or time between vehicle uses and the assumptions used in determining these values are described below. All of the other emissions are dependent on VMT. ENVIRON estimated traffic emissions using the trip rates specified in the Traffic Study¹³ and CalEEMod™ default inputs. **Table 13** summarizes the trip generation for the Specific Plan.

The analysis for criteria pollutants does not include the benefit of reductions from the regulatory programs such as Pavley and Advance Clean Cars. AB 1493 (“the Pavley Standard”) requires CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 and thereafter. The CalEEMod™ model includes GHG emission reductions for non-commercial passenger vehicles and light-duty trucks of model year 2017 – 2025. While there is an expectation that the increased fuel efficiency would also help reduce criteria pollutant emissions, CalEEMod™ does not incorporate a specific estimate or the benefits to criteria air pollutants. The Advanced Clean Cars program introduced in 2012 combines the control of smog, soot causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2015 through 2025. This regulation has also not been incorporated into CalEEMod™. Thus, if the Pavley Standard and Advanced Clean Car program were incorporated, the traffic mobile related emissions would be expected to be lower than that estimated here.

3.3.3.1 Trip Type

In CalEEMod™, the trip type breakdown describes the purpose of the trip generated at each land use. For example, the trip type breakdown indicates the percentage of trips generated at single family home for work, for shopping, and for other purposes. Two sets of trip type breakdown are used in CalEEMod™, however, since the analysis relies upon trip generation and vehicle miles traveled estimates provided by the Traffic Consultant, the percentage breakdown of trip types shown in the CalEEMod™ analyses are not relevant to this analysis.¹⁴

- **Commercial Trips** – These trips include commercial-customer (C-C), commercial-work (C-W) and commercial-nonwork (C-NW). A C-C trip represents a trip made by someone who

¹³ Fehr and Peers. “Transportation Impact Analysis for Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail.” May, 2015.

¹⁴ SCAQMD, 2013, California Emissions Estimator Model User’s Guide, Appendix A, page 20. Version 2013.2.2. Available at: <http://www.CalEEMod.com/>. Accessed: March 2015.

is visiting the commercial land use to partake in the services offered by the site. The C-W trip represents a trip made by someone who is employed by the commercial land use. The C-NW trip represents a trip associated with the commercial land use other than by customers or workers. An example of C-NW trips includes trips made by delivery vehicles of goods associated with the land use. The trip type breakdown from the number of workers and or truck trips from Institute of Transportation Engineers and an analysis of information was used as default to assign the trip type breakdowns for all land uses in CalEEMod™.

3.3.3.2 Primary Trip Length

The Traffic Consultant provided an estimated average trip length for all trips for the Specific Plan. The average trip length was applied to all trip types in the analysis. While CalEEMod™ provides default options for a 'rural' and 'urban' setting for the various geographic areas in California, and this analysis assumed 'urban' based on the location in Carlsbad, California, the analysis is based on the Traffic Consultant estimated trip rates and average trip length.

3.3.3.3 Trip Reductions

The Specific Plan will reduce the estimated trip generation based on its implementation of the traffic-related design elements and EPFs, collectively referred to as TDM measures. The TDM measures are estimated to reduce the trips generation by 6% for the retail, theatre, and supermarket land uses.¹⁵ The trip generation rates incorporate the trip reductions associated with these features.

3.3.3.4 Pass-by and Diverted Trips

Trip link types further describe the characteristics of the trip attracted to each land use, whether it is a primary trip, a diverted link trip, or a pass-by trip. For example, a commercial customer pass-by trip could be a person going from home to shop on his/her way to work. In addition, a commercial customer diverted-link trip could be a person going from home to work, and on its way making a diversion to shop. Pass-by trips generate virtually no additional running emissions but could generate additional resting and startup emissions. Diverted trips generate less running emissions compared to primary trips, and can also generate additional resting and startup emissions.

The Specific Plan Traffic Study incorporated a reduction related to pass-by trips and it was conservatively assumed that there were no additional diverted trips. The trip rates, based on the Traffic Study analysis, are shown in **Table 14**.

3.3.3.5 Estimated Emissions from Mobile Sources

The Specific Plan was estimated to generate approximately 81,659,251 VMT/yr and was estimated to result in the emissions shown in **Table 15**.

3.3.4 Operational Emissions Results

The regional daily emissions estimated due to the Specific Plan operations are summarized in **Table ES-3** for the Specific Plan. These emissions were estimated using the methodology as

¹⁵ Fehr and Peers. "Transportation Impact Analysis for Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail." May, 2015.

described above. The estimated emissions include onsite emissions from stationary sources and offsite emissions from on-road sources.

The estimated emissions show that the regional operational maximum daily emissions for the Specific Plan are less than the mass daily significance criteria for NO_x , SO_2 , and $\text{PM}_{2.5}$ and greater than the mass daily significance criteria for VOC, CO, and PM_{10} . The primary source of the operational emissions is the traffic mobile sources. The emissions from traffic mobile sources are expected to gradually decline in the future as cars become more fuel efficient due to existing regulations (i.e., Pavley Standard and the Advanced Clean Cars program). The Specific Plan has also incorporated Transportation Demand Management programs to help reduce trip generation. The design of the Specific Plan that incorporates multiple land use types will also help reduce total VMT by shortening potential trips. The VOC emissions are also due to the consumer products that are expected to be used by the workers and customers at the Specific Plan site.

This analysis does not quantify emissions reduction from the Pavley Standard or the Advanced Clean Cars program, which are expected to reduce the emissions estimated from mobile sources.

4 Air Dispersion Modeling Analysis

4.1 Screening Evaluation of Construction Emissions

The Specific Plan construction emissions will not result in exceedances of any federal or state ambient air quality standards (see **Table ES-2**).¹⁶ A SCREEN3 air dispersion model was used to perform a screening evaluation of the construction emissions, and compare the onsite construction emissions for NO_x, CO, PM₁₀, and PM_{2.5} to the federal and state ambient air quality standards.¹⁷ Based on the limitations of the SCREEN3 model, a 1,000-ft x 1886-ft x 8-ft volume source and meteorological conditions excluding typical night-time stability conditions was modeled since construction is only expected to occur during day-time hours. As a conservative assumption, the maximum estimated concentration was used for the analysis, which is assumed to occur approximately 881 meters (2,890 feet) from the center of the volume source. To estimate the annual concentrations, an adjustment factor was applied to the 1-hour screening results based on USEPA guidance. The supporting analysis files are in Appendix B.

The estimated emissions show that the construction emissions will not exceed the federal and state ambient air quality standards, except for PM₁₀ and PM_{2.5} which exceed the state ambient air quality standards and federal 24-hour PM_{2.5} standard. Since the background concentrations for PM₁₀ and PM_{2.5} exceed the state and federal ambient air quality standards, the SCAQMD incremental criteria are used to assess if the construction emissions contribute substantially to an existing air quality violation. (As the SDAPCD has not issued comparable criteria, this analysis relies on the SCAQMD criteria.) The results show that the estimated ambient air quality concentrations will be less than the ambient air quality standards and the SCAQMD incremental significance criterion for PM₁₀ and PM_{2.5}; therefore, impacts would be less than significant.

The construction emissions are based on conservative assumptions to represent the maximum level of construction activity that may occur on the Specific Plan Site on a given day. Furthermore, the SCREEN3 modeling analysis is based on the combination of maximum emissions that may occur with the worst-case meteorological conditions. Thus, these are conservatively high estimates and may never occur.

4.2 Localized Carbon Monoxide Impacts

A screening CO analysis was completed based on the County of San Diego's Guidelines, which provide that intersections operating at or below a level of service of "E" and have peak-hour trips exceeding 3,000 trips should be further evaluated.¹⁸ Based on the analysis shown in **Table 16**,

¹⁶ Operational emissions were not evaluated since the primary emission source is offsite mobile sources and the Proposed Specific Plan does not anticipate any increases in the types of onsite emission sources that would typically require such an evaluation. The onsite operational emission sources that typically require such an evaluation are NO_x and CO combustion emissions from stationary sources such as flares and turbines, and/or significant on-site mobile sources such as earth-moving equipment.

¹⁷ Note that there are no ambient air quality standards for VOC. The SO_x emissions are minimal and are unlikely to exceed SO₂ ambient air quality standards. Therefore, a modeling analysis was not performed for either of these pollutants.

¹⁸ County of San Diego, 2007. Guidelines for determining Significance and Report Format and Content Requirements: Air Quality. March 19, 2007. Available at: <http://www.sandiegocounty.gov/dplu/docs/AQ-Guidelines.pdf>. Accessed: March 2015.

there are eight intersections meeting those criteria. Accordingly, those intersections were further evaluated, as described below.

First, it has long been recognized that CO exceedances are caused by vehicular emissions,¹⁹ primarily when idling at intersections.²⁰ Accordingly, vehicle emissions standards have become increasingly more stringent. Before the first vehicle emission regulations, cars in the 1950's were typically emitting about 87 grams of CO per mile.²¹ Since the first regulation of CO emissions from vehicles (model year 1966) in California, vehicle emissions standards for CO applicable to light duty vehicles have decreased by 96 percent for automobiles.^{22,23} Currently, the CO standard in California is a maximum of 3.4 grams/mile for passenger cars (with provisions for certain cars to emit even less).²⁴ With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in ambient air have steadily declined.

Second, the analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances due to the Specific Plan. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).²⁵ As discussed in the 1992 CO Plan, peak CO concentrations are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the evaluated

¹⁹ USEPA. 2000. Air Quality Criteria for Carbon Monoxide. EPA 600/P-099/001F. June.

²⁰ County of San Diego, 2007. Guidelines for determining Significance and Report Format and Content Requirements: Air Quality. March 19, 2007. Available at: <http://www.sandiegocounty.gov/dplu/docs/AQ-Guidelines.pdf>. Accessed: March 2015.

²¹ USEPA. Available at: <http://yosemite.epa.gov/R10/airpage.nsf/webpage/Milestones+in+Auto+Emissions+Control>. Accessed: March 2015.

²² National Academy Board on Energy and Environmental Systems. 2008. Review of the 21st Century Truck Partnership. Appendix D: Vehicle Emission Regulations [excerpt from. Available at: http://books.nap.edu/openbook.php?record_id=12258&page=107. Accessed: March 2015.

²³ Kavanagh, Jason. 2008. Untangling U.S. Vehicle Emissions Regulations.

²⁴ CARB. 2010. Available at: http://www.arb.ca.gov/msprog/levprog/cleandoc/ldtps_clean_complete_warranty_12-10.pdf. Accessed: March 2015.

²⁵ SCAQMD. 1992. Federal Attainment Plan for Carbon Monoxide.

intersection exceeded more than 400,000 vehicles per day.²⁶ The Los Angeles County Metropolitan Transportation Authority evaluated the LOS in the vicinity of the Wilshire Blvd/Veteran Ave. intersection²⁷ and found it to be Level E at peak morning traffic and Level F at peak afternoon traffic.²⁸

At build out of the Specific Plan, the highest average daily trips at an intersection would be approximately 70,380 at the El Camino Real/Palomar Airport Road intersection,²⁹ which is below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP. This daily trip estimate is based on the peak hour conditions of the intersection. There is no reason unique to the El Camino Real/Palomar Airport Road intersection compared to the meteorology in the South Coast Air Basin to conclude that the CO concentrations at the El Camino Real/Palomar Airport Road intersection would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP. The supporting data for this analysis is included in **Table 16**.

²⁶ Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

²⁷ The Metropolitan Transportation Authority measured traffic volumes and calculated the LOS for the intersection Wilshire Blvd/ Sepulveda Ave. which is a block west along Wilshire Blvd., still east of Highway 405.

²⁸ Metropolitan Transportation Authority. 2004. Congestion Management Program for Los Angeles County. Exhibit 2-6 and Appendix A. July 22.

²⁹ Fehr and Peers. "Transportation Impact Analysis for Agua Hedionda South Shore Specific Plan for 85% Open Space and 15% Retail." May, 2015.

5 Summary of Results

5.1 Conformance to the Regional Air Quality Strategy

The SDAPCD and SANDAG are responsible for developing and implementing the San Diego County Regional Air Quality Strategy (RAQS), the purpose of which is to demonstrate attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). A significant impact would occur if the Specific Plan would conflict with or obstruct the implementation of the RAQS.

By way of background, in order to project future emissions and determine the necessary attainment and maintenance strategies, the RAQS relies upon emissions data from CARB and SANDAG, for mobile and area sources, and is based upon growth forecasts in San Diego County (including cities in the County). The RAQS was first adopted in 1991 and was most recently updated in 2009.³⁰

The 2009 RAQS is based on the City of Carlsbad's existing General Plan (1994), which assumed 463,600 sq.ft. of recreational commercial land uses on the Specific Plan Site. The Specific Plan, with 585,000 sq.ft. of commercial land uses, exceeds the 2009 RAQS' development projection by 121,400 sq.ft. As such, it is assumed that the Specific Plan would result in emissions greater than that contemplated in the 2009 RAQS and, therefore, potentially conflict with the RAQS' ability to demonstrate attainment and maintenance of the NAAQS and CAAQS.

It should be noted, however, that the Specific Plan is consistent with the objectives of the 2009 RAQS for smart growth. More specifically, the Specific Plan is expected to help shorten trip lengths made by retail and commercial customers in north San Diego County who would otherwise need to travel to downtown San Diego or Orange County for similar retail and commercial uses. The Specific Plan is also expected to encourage hybrid vehicle usage through preferential parking for electric vehicles and electric vehicle charging stations, and encourage the use of public transportation through connectivity to existing bus and train services, further helping reduce air quality emissions from mobile sources consistent with the 2009 RAQS.

The Specific Plan also is consistent with the City of Carlsbad's draft General Plan update, as well as SANDAG's 2050 Regional Transportation Plan & Sustainable Communities Strategy (see Appendix C).³¹ Thus, it is anticipated that the Specific Plan will be consistent with future updates to the 2009 RAQS since the RAQS would be updated based on current CARB and SANDAG³² information, which would include the City of Carlsbad's latest land use planning information. The updated RAQS is anticipated to be developed in 2016.³³

³⁰ Available at: <http://www.sdapcd.org/planning/plan.html>. Accessed: February 2015.

³¹ While the primary purposes of SANDAG's 2050 Regional Transportation Plan & Sustainable Communities Strategy are to reduce vehicle miles traveled in the region and secure corresponding reductions in greenhouse gas emissions, those purposes result in co-benefits in the form of criteria air pollutant emission reductions.

³² The traffic model used by SANDAG in connection with development of its 2050 Regional Transportation Plan & Sustainable Communities Strategy assumed that approximately 653,000 sq.ft. of commercial land uses would be located on the Proposed Specific Plan Site, which is slightly larger than the amount of development contemplated by the Proposed Specific Plan.

³³ Based on a conversation with Andy Hamilton at SDAPCD.

5.2 Conformance to Federal and State Ambient Air Quality Standards

The Specific Plan's conformance to the Federal and State ambient air quality standards is evaluated through comparison of the Specific Plan's construction and operational emissions to the criteria identified by the City of Carlsbad (see **Table ES-1, ES-2, and ES-3**).

For construction, the mass criteria pollutant emissions for the Specific Plan are estimated to be less than the significance criteria for NO_x, CO, SO₂, PM₁₀, and PM_{2.5}, and greater than the significance criterion for VOC (**Table ES-1**). The construction VOC emissions are primarily due to the use of architectural coatings. The Specific Plan will comply with SDAPCD Rules and Regulations that require the use of low VOC containing coatings to minimize the potential VOC emissions. It should be noted that the construction emissions are based on conservative assumptions to represent the maximum level of construction activity that may occur, and therefore, the estimated emissions may never occur. Additional feasible mitigation measures were not identified.

The construction-related ambient air quality evaluation shows that the Specific Plan's construction emissions would not result in an exceedance of the NAAQS or CAAQS for NO₂ and CO, which are currently in attainment in the San Diego Air Basin (SDAB), as shown in **Table ES-2**. For PM₁₀ and PM_{2.5}, the SDAB is in attainment for the 24-hour PM₁₀ and PM_{2.5} NAAQS and the annual average PM₁₀ for CAAQS, but is identified as non-attainment for the 24-hour PM₁₀ and the annual PM_{2.5} CAAQS. Since background concentrations already exceed the NAAQS and CAAQS for PM₁₀ and PM_{2.5}, the results are compared to the SCAQMD incremental significance criteria to further assess the Specific Plan's impact for these pollutants. The Specific Plan construction modeling results are below these criteria, and thus the Specific Plan is also considered to have a less than significant impact for these pollutants.

For operational emissions, the mass criteria pollutant emissions for the Specific Plan are less than the significance criteria for SO₂ and greater than the significance criteria for VOC, NO_x, CO, PM₁₀, and PM_{2.5} (**Table ES-3**). The primary source of the operational emissions are the traffic mobile sources. The Specific Plan has incorporated a TDM Program to help reduce traffic related emissions. The emissions from traffic mobile sources are expected to decline in the future as cars become more fuel efficient due to existing regulations (i.e., Pavley Standard and the Advanced Clean Cars program). The VOC emissions are also due to the consumer products that are expected to be used by employees. Additional feasible mitigation measures were not identified.

The evaluation of the Specific Plan operational emissions shows that the Specific Plan would not exceed the CO hotspots significance criteria for any intersection. Operational emissions were not further evaluated since the primary emission source is offsite mobile sources and the Specific Plan does not anticipate any increases in the types of onsite emission sources that would typically require such an evaluation. The onsite operational emission sources that typically require such an evaluation are NO_x and CO combustion emissions from stationary sources such as flares and turbines, and/or significant on-site mobile sources such as earth-moving equipment.

5.3 Cumulative Evaluation of Criteria Pollutants

The evaluation of the cumulative contribution of the Specific Plan is based on the Specific Plan criteria air pollutant emissions. A significant cumulative impact would occur if the Specific Plan would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment (or precursors to any such criteria pollutant). Since there are no significance criteria specific to assess the cumulative impacts, the same SDAPCD Rule 20.2 criteria are used for this analysis. If the Specific Plan's criteria air pollutant emissions are significant, then the Specific Plan has a cumulatively considerable net increase of those emissions. If the Specific Plan's criteria air pollutant emissions are less than significant, the Specific Plan will be considered to not be cumulatively considerable. While it is possible that the Specific Plan may contribute to a significant cumulative impact in combination with emissions from other proposal or reasonably foreseeable projects that are in excess of the criteria, the Specific Plan will be considered to not be cumulatively considerable. The San Diego Air Basin is designated as a federal nonattainment area for ozone, and a state nonattainment area of ozone, PM₁₀, and PM_{2.5}.³⁴

Of the criteria pollutants and precursors for which SDAB is non-attainment, the Specific Plan's construction emissions are significant for VOC, and the operational emissions are significant for VOC, NO_x, PM₁₀, and PM_{2.5}. Thus, the Specific Plan results in a cumulatively considerable net increase of VOC due to construction and VOC, NO_x, PM₁₀ and PM_{2.5} emissions due to operations. Although the operation of the Specific Plan would result in significant CO emissions, CO is not evaluated as part of this analysis because the SDAB is in attainment for CO.

5.4 Sensitive Receptors

To begin, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term healthcare facilities, rehabilitation centers, convalescent homes, and retirement homes. The nearest sensitive receptors are located greater than 1,500 feet to the west of the Specific Plan Site. Sensitive receptors are also located greater than 1,500 feet to the northeast, across the Agua Hedionda.

Here, the Specific Plan would increase criteria pollutant emissions relative to the existing environmental conditions on the Specific Plan site. However, air quality in the SDAB is continually improving, with very few violations of air quality standards on an annual basis. Further improvements are expected as CARB and others endeavor to maximize co-benefits in existing and new regulatory standards (e.g., many standards primarily intended to reduce greenhouse gas emissions, also serve to reduce criteria pollutant emissions). Neither CARB nor the SDAPCD has identified a methodology for correlating increases in pollutant emissions with health effects at the plan- or project-level; however, readily-available modeling tools were used to assess the Specific Plan's potential to adversely impact sensitive receptors. As discussed below, that analysis found that the Specific Plan's construction and operational emissions would not be significant.

³⁴ California Air Resources Board, Ambient Air Quality Standards, 2013. Available at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed: February 2015.

5.4.1 Construction

Criteria pollutants and Toxic Air Contaminants (TACs) will be emitted during construction. The Specific Plan construction criteria pollutant emissions are discussed above. The Specific Plan construction activities will also emit TACs, primarily as diesel particulate matter (DPM), via the exhaust of diesel construction equipment. According to SDAPCD methodology, health effects from carcinogenic air toxics (such as DPM) are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The Specific Plan's construction activities are estimated to occur for approximately two years. Furthermore, the distance between the Specific Plan Site and the nearest receptor is such that air dispersion will dilute the concentration of any emitted pollutants. Thus, while the Specific Plan is significant for VOC emissions, the Specific Plan is not expected to expose sensitive receptors to substantial TAC concentrations given the relatively short duration of construction TAC emissions and the distance to the nearest sensitive receptors.

5.4.2 Operations

Criteria pollutants and TACs will be emitted during operations. The Specific Plan operational criteria pollutant emissions are discussed above. The Specific Plan operations will also emit TACs, primarily from fuel combustion (i.e., mobile source and natural gas from boilers or heaters). The Specific Plan's operational emissions are primarily due to traffic mobile sources, which will largely occur off-site. Thus, for projects such as the Specific Plan, on-site emissions are generally not a source of pollutants for nearby sensitive receptors. The localized CO concentrations are evaluated to assess the potential impact of offsite mobile emissions. As discussed above, the Specific Plan results in a less-than-significant impact relative to CO hotspots and, therefore, the Specific Plan is not expected to expose sensitive receptors to substantial pollutant concentrations.

5.5 Odor

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source, the wind speeds and direction, and the sensitivity of the receiving location each contribute to the intensity of the impact. While offensive odors rarely cause any physical harm, they can be unpleasant and cause distress among the public and generate citizen complaints. Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. While the Specific Plan includes agricultural uses, they are the same uses as what currently exists at the Specific Plan Site. The Specific Plan also does not include any new uses that are typically associated with odors, and thus the Specific Plan does not anticipate any odor impacts.

Tables

Table 1. Specific Plan Land Uses and Square Footages

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Specific Plan Entitlement ¹		CalEEMod™ Analysis				
		Land Use Category	Land Use Subtype ²	Land Use Unit Amount	Size Metric	Lot Acreage ⁴
Retail	488 TSF	Retail	Regional Shopping Center	488	TSF	24.4
Theater	2500 seats	Recreation	Movie Theater (No Matinee)	2,500	seat	2.8
Market/Grocery	46 TSF	Retail	Supermarket	46	TSF	2.3
Surface Parking Spaces	500 spaces	Parking	Parking Lot	500	space	0.7
Structured Parking Spaces	4,202 spaces	Parking	Unenclosed Parking Structure	4,202	space	5.6
Open Space/Agricultural Fields	176.7 acres	User Defined	User Defined Recreational ³	175.6	acre	175.6

Notes:

¹ Specific Plan conditions defined based on Specific Plan description and traffic study land use type.

² Land uses as defined in CalEEMod™. When an exact mapping of a land use was not available in CalEEMod™ relative to the "Specific Plan Entitlement," a land use with similar emission characteristics was chosen. For example, retail was represented as a 'regional shopping center,' and passive parks/AG uses was represented as 'user defined recreational.' The CalEEMod™ model only has a single land use subtype of 'movie theater (no matinee)' to represent a movie theatre. Thus, it is used for this analysis even though the Specific Plan may have a 'matinee' showing.

³ The acreage for the open space and agricultural fields land use in the CalEEMod™ analysis is slightly smaller than the Specific Plan Entitlement. If the CalEEMod™ analysis was updated to the Specific Plan Entitlement, the related emission estimates are not expected to change.

⁴ The total lot acreage for the Retail, Theater, Market/Grocery, and Parking Spaces used in CalEEMod™ modeling was conservatively estimated

as 35.9 acres to represent the area potentially impacted by construction activity. This area includes building and parking structure footprints, water features, hardscape and landscaping area

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

TSF - thousand square feet

Table 2. City of Carlsbad Air Quality Significance Criteria

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Mass Daily Criteria			
Criteria Pollutant	Construction Emissions¹		
	lbs/day		
Respirable Particulate Matter (PM ₁₀)	100		
Fine Particulate Matter (PM _{2.5})	55		
Nitrogen Oxides (NO _x)	250		
Sulfur Oxide (SO _x)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOC)	137		
Criteria Pollutant	Operational Emissions¹		
	lbs/hr	lbs/day	tpy
Respirable Particulate Matter (PM ₁₀)	--	100	15
Fine Particulate Matter (PM _{2.5})	--	55	10
Nitrogen Oxides (NO _x)	25	250	40
Sulfur Oxide (SO _x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	--	3.2	0.6
Volatile Organic Compounds (VOC) ²	--	137	13.7

Notes:

¹ Air quality screening criteria follow those published in the Draft Program Environmental Impact Report for the Carlsbad General Plan Update. See Table 3.2.5. Available at: <http://www.carlsbadca.gov/services/depts/planning/update/documents.asp>. Accessed: March, 2015. Consistent with the approach by San Diego County, the analysis is based on the daily criteria, which is identified as the most appropriate for evaluation of construction and operational emissions for the land uses in the Specific Plan.

Abbreviations:

PM₁₀ - coarse particulate matter
 PM_{2.5} - fine particulate matter
 NO_x - nitrogen oxides
 SO_x - sulfur oxide
 CO - carbon monoxide

VOC - volatile organic compounds
 µg/m³ - micrograms per cubic meter
 lbs - pounds
 tpy - tons per year

Table 3. Construction Schedule Assumptions

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase Name^{1,2}	Phase Type	Start Date⁵	End Date⁵
Demolition	Demolition	2017/07/01	2017/07/21
Site Preparation ³	Site Preparation	2017/07/22	2017/09/15
Grading ³	Grading	2017/09/16	2017/12/08
Building Construction	Building Construction	2017/12/09	2019/04/26
Paving ⁴	Paving	2019/04/27	2019/08/30
Architectural Coating	Architectural Coating	2019/08/31	2019/11/08

Notes:

¹ The Specific Plan construction schedule.

² Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and the Specific Plan estimates.

³ Site preparation and grading includes excavation activity and below grade parking foundation.

⁴ Paving includes leveling of land / pavements around the constructed buildings.

⁵ Construction activity assumed to occur 5 days/week.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEl

Table 4. Construction Equipment Mix Assumptions

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Construction Phase Name ^{1,2}	OffRoad Equipment Type	Equipment Unit Amount	Usage Hours ⁵	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	162	0.38
	Rubber Tired Dozers	2	8	255	0.40
Site Preparation ³	Rubber Tired Dozers	3	8	255	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading ³	Excavators	2	8	162	0.38
	Graders	1	8	174	0.41
	Rubber Tired Dozers	1	8	255	0.40
	Scrapers	2	8	361	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	226	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving ⁴	Pavers	2	8	125	0.42
	Paving Equipment	2	8	130	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48

Notes:

¹ The Specific Plan construction schedule.

² Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and the Specific Plan estimates.

³ Site preparation and grading includes excavation activity and below grade parking foundation.

⁴ Paving includes leveling of land/pavements around the constructed buildings.

⁵ Construction activity assumed to occur 5 days/week.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

Table 5. Construction Worker, Vendor and Hauling Trips Summary

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Construction Phase Name ^{1,2}	OffRoad Equipment Type	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Demolition	Concrete/Industrial Saws Excavators Rubber Tired Dozers	15	0	0
Site Preparation ³	Rubber Tired Dozers Tractors/Loaders/Backhoes	18	0	0
Grading ³	Excavators Graders Rubber Tired Dozers Scrapers Tractors/Loaders/Backhoes	20	0	0
Building Construction	Cranes Forklifts Generator Sets Tractors/Loaders/Backhoes Welders	984	405	0
Paving ⁴	Pavers Paving Equipment Rollers	15	0	0
Architectural Coating	Air Compressors	197	0	0

Notes:

¹ The Specific Plan construction schedule.

² Construction assumptions based on CalEEMod™ version 2013.2.2 defaults and the Specific Plan estimates.

³ Site preparation and grading includes excavation activity and below grade parking foundation.

⁴ Paving includes leveling of land/pavements around the constructed buildings.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

Table 6. Grading Volumes

Agua Hedionda 85/15 Specific Plan
Carlsbad, California

Specific Plan Construction Phase1	Material Imported	Material Exported	Total Altered Area
	Cubic Yards		Acres
Grading	0	0	35.9

Notes:

¹ Based on the Specific Plan description.

Table 7. Criteria Air Pollutant Construction Emissions from Off-Road Equipment

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Emission Type	Construction Phase ¹	Year	VOC ²	NO _x	CO	SO ₂	Exhaust PM ₁₀	Fugitive ³ PM ₁₀	Exhaust PM _{2.5}	Fugitive ³ PM _{2.5}
			(lbs/day) ^{1, 2}							
Offroad Equipment	Demolition	2017	4.0	43	34	0.0	0.0	2.1	0.0	2.0
	Site Preparation	2017	4.8	52	39	0.04	8.1	2.8	4.5	2.5
	Grading	2017	6.1	70	47	0.1	4.2	3.3	1.7	3.1
	Building Construction	2017	3.1	26	18	0.0	0.0	1.8	0.0	1.7
		2018	2.7	23	18	0.0	0.0	1.5	0.0	1.4
		2019	2.4	21	17	0.0	0.0	1.3	0.0	1.2
	Paving	2019	1.4	15	14	0.0	0.0	0.8	0.0	0.7
Architectural Coating	2019	1077	2	2	0.00	0.0	0.1	0.0	0.1	

Notes:

¹ Emissions were estimated using CalEEMod™ version 2013.2.2.

² ROG as defined by CalEEMod™ is assumed to be equal to VOC.

³ Fugitive PM₁₀/PM_{2.5} emissions from onsite trucks controlled by watering the construction two times per day.

Abbreviations:

VOC - volatile organic compounds

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - particulate matter

PM_{2.5} - particulate matter

lb - pounds

CalEEMod® - CALifornia Emissions Estimator MODel

Table 8. Criteria Air Pollutant Construction Emissions from On-Road Vehicles

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Emission Type	Construction Phase ¹	Year	VOC ²	NOx	CO	SO ₂	Exhaust PM ₁₀	Fugitive ³ PM ₁₀	Exhaust PM _{2.5}	Fugitive ³ PM _{2.5}
			(lbs/day) ^{1, 2}							
Worker	Demolition	2017	0.1	0.1	0.6	0.002	0.1	0.0	0.0	0.0
	Site Preparation	2017	0.1	0.1	0.7	0.002	0.1	0.0	0.0	0.0
	Grading	2017	0.1	0.1	0.8	0.0	0.2	0.0	0.0	0.0
	Building Construction	2017	3.3	4.1	39.8	0.1	8.1	0.1	2.1	0.1
		2018	3.0	3.8	36.1	0.1	8.1	0.1	2.1	0.1
		2019	2.8	3.5	33.3	0.1	8.1	0.1	2.1	0.1
	Paving	2019	0.0	0.1	0.5	0.0	0.1	0.0	0.0	0.0
Architectural Coating	2019	0.6	0.7	6.7	0.02	1.6	0.0	0.4	0.0	
Vendor	Demolition	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Site Preparation	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Building Construction	2017	4.5	35	57.4	0.1	2.7	0.5	0.8	0.5
		2018	4.2	32	55.0	0.1	2.7	0.5	0.8	0.4
		2019	3.9	29	52.6	0.1	2.7	0.4	0.8	0.4
	Paving	2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Architectural Coating	2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Hauling	Demolition	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Site Preparation	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Building Construction	2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Architectural Coating	2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Notes:

- ¹ Emissions were estimated using CalEEMod™ version 2013.2.2.
- ² ROG as defined by CalEEMod™ is assumed to be equal to VOC.
- ³ Onsite fugitive PM₁₀/ PM_{2.5} emissions are assumed to be controlled by watering two times per day.

Abbreviations:

- VOC - volatile organic compounds
- NO_x - nitrogen oxides
- CO - carbon monoxide
- SO₂ - sulfur dioxide
- PM₁₀ - particulate matter
- PM_{2.5} - particulate matter
- lb - pounds
- CalEEMod⁺ - CALifornia Emissions Estimator MODEL

Table 9. Criteria Air Pollutant Construction Emissions from Architectural Coating and Paving
 Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Construction Phase	Year	VOC ¹
		Maximum (lbs/day) ²
		Specific Plan
Paving	2019	1.49
Architectural Coating	2019	1,078

Notes:

¹ ROG as defined by CalEEMod™ is assumed to be equal to VOC.

² Emissions were estimated using CalEEMod™ version 2013.2.2.

Abbreviations:

VOC - volatile organic compound

CalEEMod - CALifornia Emissions Estimator MODel

lbs - pounds

Table 10. Summary of Criteria Air Pollutant Construction Emissions¹
 Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Year	VOC ²	NO _x	CO	SO ₂ ³	PM ₁₀ Total ⁴	PM _{2.5} Total ⁴
	Maximum (lbs/day) ¹					
2017	11	70	115	0	14	8
2018	10	59	109	0	13	5
2019	1,078	53	103	0	13	5
Maximum Daily Emissions	1,078	70	115	0	14	8
Significance Criteria	137	250	550	250	100	55
Above Criteria?	Yes	No	No	No	No	No

Notes:

¹ Emissions estimated using CalEEMod™ version 2013.2.2.

² ROG as defined by CalEEMod™ is assumed to be equal to VOC as defined by SDAPCD.

³ SO₂ as defined by CalEEMod™ is assumed to represent SO_x emissions.

⁴ Fugitive PM₁₀ / PM_{2.5} emissions from onsite trucks controlled by watering the construction site two times per day.

Abbreviations:

VOC - volatile organic compound

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - coarse particulate matter

PM_{2.5} - fine particulate matter

lbs - pounds

CalEEMod™ - CALifornia Emissions Estimator MODeL

ROG - reactive organic gases

SO_x - sulfur oxides

Table 11. Criteria Air Pollutant Emissions Associated with Area Sources

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

Area Sources ^{1,2}	ROG ³	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	(lb/day)					
Architectural Coating	62.99	0.00	0.00	0.00	0.00	0.00
Consumer Products	216.46	0.00	0.00	0.00	0.00	0.00
Landscaping	0.08	0.01	0.82	0.00	0.00	0.00
Total	279.53	0.01	0.82	0.00	0.00	0.00

Notes:

¹ Categories that CalEEMod™ classifies as "Area Sources." No emissions are associated with "Hearth," since CalEEMod™ does not assume any hearths/fireplaces with the proposed land uses.

² Emissions were estimated using CalEEMod™ version 2013.2.2. Emissions reported as zero are considered below the reporting level of CalEEMod™ and not necessarily equal to zero.

³ ROG as defined by CalEEMod™ is assumed to be equal to VOC.

Abbreviations:

ROG - reactive organic gases

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - coarse particulate matter

PM_{2.5} - fine particulate matter

lbs - pounds

CalEEMod - CALifornia Emissions Estimator MODel

SDAPCD - San Diego Air Pollution Control District

VOC - volatile organic compounds

Table 12. Criteria Air Pollutant Emissions Associated with Natural Gas Use

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

CalEEMod™ Land Use ^{1,2}	Specific Plan Entitlement	Natural Gas Use ³	ROG ⁴	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
		(kBtu/day)	(lbs/day)					
Regional Shopping Center	Retail	2.58	0.03	0.25	0.21	0.00	0.02	0.02
Movie Theater (No Matinee)	Theater	1.46	0.02	0.14	0.12	0.00	0.01	0.01
Supermarket	Market/Grocery	2.84	0.03	0.28	0.23	0.00	0.02	0.02
Parking Lot	Surface Parking Spaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking Structure	Structured Parking Spaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Recreational	Open Space/Agricultural Fields	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		6.88	0.07	0.67	0.57	0.00	0.05	0.05

Notes:

¹ Emissions were estimated using CalEEMod™ version 2013.2.2. See report for the Environmental Protection Features and assumptions.

² Emissions reported as zero are considered below the reporting level of CalEEMod™ and not necessarily equal to zero.

³ Energy usage for each land use was based on CalEEMod™ databases, which were obtained from CEUS or RASS studies on energy use and adjusted to account for Title 24 - 2013 building standards for the 'new development'. The analysis conservatively does not include a 5% reduction to exceed the 2013 Title 24 standards. See Appendix A of the CalEEMod™ user's guide for details.

⁴ ROG as defined by CalEEMod™ is assumed to be equal to VOC as defined by SDAPCD.

Abbreviations:

ROG - reactive organic gases
 NO_x - nitrogen oxides
 CO - carbon monoxide
 SO₂ - sulfur dioxide
 PM₁₀ - coarse particulate matter
 PM_{2.5} - fine particulate matter
 kBTU - 1,000 British thermal units

lbs - pounds
 CalEEMod - CALifornia Emissions Estimator MODel
 CEUS - California Commercial End-Use Survey
 RASS - California Statewide Residential Appliance Saturation Study
 VOC - volatile organic compounds
 SDAPCD - San Diego Air Pollution Control District

Table 13. Trip Generation Estimates from the Traffic Study

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

CalEEMod™ Land Use	Specific Plan Entitlement	Quantity	Unit	Daily Trips (trips/day)
Regional Shopping Center	Retail	488	TSF	24,400
Movie Theater (No Matinee)	Theater	2500	seat	4,500
Supermarket	Market/Grocery	46	TSF	6,900
Parking Lot	Surface Parking Spaces	500	space	--
Unenclosed Parking Structure	Structured Parking Spaces	4202	space	--
User Defined Recreational	Open Space/Agricultural Fields	175.6	acre	875
Subtotal				36,675
Internal Trip Capture ¹				-3,580
Vehicle Trips after Internalization				33,095
Pass By ²				-4,036
Diverted Trips ³				-4,964
Trip Generation Reduction from TDM ⁴				-1,401
Total Net New Trips				22,694

Notes:¹ Assumed 10% internal trip capture for Regional Shopping Center, Theater, and Supermarket² Pass By Percentages:

Regional Shopping Center: 11% reduction for daily trips

Theater: 17% reduction for daily trips

Supermarket: 15% reduction for daily trips

³ Diverted Trips Percentages: 15% reduction for daily trips⁴ The TDM measures are estimated to reduce the trips generation by 6% for the retail, theatre and supermarket land uses.Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

TDM - Transportation Demand Management

TSF - thousand square feet

CARB - California Air Resource Board

NAT - No Action Taken

Table 14. CalEEMod™ Model Inputs Associated with Traffic

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

CalEEMod™ Land Use	Specific Plan Entitlement	Unit	Specific Plan Trip Rates ¹ (trips/day/unit)		
			Weekday	Saturday	Sunday
Regional Shopping Center	Retail	TSF	31.30	36.43	18.40
Movie Theater (No Matinee)	Theater	seat	1.04	1.04	1.04
Supermarket	Market/Grocery	TSF	88.83	154.30	144.61
Parking Lot	Surface Parking Spaces	space	0	0	0
Unenclosed Parking Structure	Structured Parking Spaces	space	0	0	0
User Defined Recreational	Open Space/Agricultural Fields	acre	4.25	4.25	4.25

Notes:

¹ Trip rates were based on the Traffic Study. Weekend trip were rates proportionally adjusted based on the default weekday/weekend ratio from CalEEMod™.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODel

TSF - thousand square feet

CARB - California Air Resource Board

NAT - No Action Taken

Table 15. Criteria Air Pollutant Emissions Associated with Traffic

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

CalEEMod™ Land Use ¹	Specific Plan Entitlement	Vehicles Miles Travelled	ROG ²	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
		(VMT / year)	(lbs/day)					
Regional Shopping Center	Retail	52,393,677	65	160	710	2	139	38
Movie Theater (No Matinee)	Theater	9,246,328	11	28	125	0.4	24	7
Supermarket	Market/Grocery	17,365,193	22	53	235	0.7	46	13
Parking Lot	Surface Parking Spaces	0	0	0	0	0	0	0
Unenclosed Parking Structure	Structured Parking Spaces	0	0	0	0	0	0	0
User Defined Recreational	Open Space/Agricultural Fields	2,654,052	3	8	36	0.1	7	2
Total		81,659,251	101	250	1,106	3	216	60

Notes:

¹ Emissions were estimated using CalEEMod™. Emissions associated with traffic include exhaust emissions during running, idling, and startup, and particulate matter fugitive emissions.

² ROG as defined by CalEEMod™ is assumed to be equal to VOC as defined by SDAPCD.

Abbreviations:

CalEEMod - CALifornia Emissions Estimator MODEL

ROG - reactive organic gases

NO_x - nitrogen oxides

CO - carbon monoxide

SO₂ - sulfur dioxide

PM₁₀ - coarse particulate matter

PM_{2.5} - fine particulate matter

VMT - vehicle miles traveled

lbs - pounds

VOC - volatile organic compounds

SDAPCD - San Diego Air Pollution Control District

Table 16. Localized Carbon Monoxide Screening Analysis

Agua Hedionda 85/15 Specific Plan
 Carlsbad, California

No.	Intersection	Maximum Peak-hour trip (trips/hour)			Estimated Daily Trips	Level of service			Exceed 3,000 Peak Trips/hour	LOS at "E" or "F"	Below San Diego Criteria? ¹
		AM	PM	Peak of AM/PM		AM	PM	Peak of AM/PM			
1	Carlsbad Blvd/Tamarack Ave	1,235	1,983	1,983	19,830	B	C	C	No	No	Yes
2	I-5 SB Ramps/Tamarack Ave	1,829	1,841	1,841	18,410	C	C	C	No	No	Yes
3	I-5 NB Ramps/Tamarack Ave	2,082	1,979	2,082	19,790	C	B	C	No	No	Yes
4	Tamarack Ave/El Camino Real	2,956	3,617	3,617	36,170	E	D	E	Yes	Yes	No
5	Cannon Rd/Carlsbad Blvd	1,356	2,173	2,173	21,730	B	C	C	No	No	Yes
6	Cannon Rd/Avenida Encinas	1,142	1,774	1,774	17,740	C	D	D	No	No	Yes
7	I-5 SB Ramps/Cannon Rd	2,449	3,015	3,015	30,150	D	C	D	Yes	No	Yes
8	I-5 NB Ramps/Cannon Rd	2,962	4,853	4,853	48,530	C	D	D	Yes	No	Yes
9	Cannon Rd/Paseo Del Norte	3,365	5,390	5,390	53,900	D	D	D	Yes	No	Yes
10	Cannon Rd/Car Country Dr	2,357	3,824	3,824	38,240	C	D	D	Yes	No	Yes
11	Cannon Rd/Armada Dr	2,337	3,176	3,176	31,760	B	B	B	Yes	No	Yes
12	Cannon Rd/Marriott Hotel Ent	1,930	2,648	2,648	26,480	A	A	A	No	No	Yes
13	Cannon Rd/Faraday Ave	1,894	2,610	2,610	26,100	B	C	C	No	No	Yes
14	Cannon Rd/El Camino Real	3,937	4,647	4,647	46,470	D	E	E	Yes	Yes	No
15	Paseo Del Norte/Car Country Dr	790	1,305	1,305	13,050	B	B	B	No	No	Yes
16	Paseo Del Norte/Outlets Dwy	702	1,370	1,370	13,700	C	B	C	No	No	Yes
17	College Blvd/Faraday Ave	1,858	2,054	2,054	20,540	C	C	C	No	No	Yes
18	College Blvd/El Camino Real	4,169	4,776	4,776	47,760	E	D	E	Yes	Yes	No
19	El Camino Real/Faraday Ave	4,767	5,016	5,016	50,160	E	E	E	Yes	Yes	No
20	Palomar Airport Rd/Avenida Encinas	1,666	2,550	2,550	25,500	C	D	D	No	No	Yes
21	I-5 SB Ramps/Palomar Airport Rd	2,520	3,657	3,657	36,570	B	A	B	Yes	No	Yes
22	I-5 NB Ramps/Palomar Airport Rd	3,889	4,645	4,645	46,450	E	C	E	Yes	Yes	No
23	Palomar Airport Rd/Paseo Del Norte	4,435	5,764	5,764	57,640	C	C	C	Yes	No	Yes
24	Palomar Airport Rd/Armada Dr	4,254	5,505	5,505	55,050	C	D	D	Yes	No	Yes
25	Palomar Airport Rd/Hidden Valley Rd	3,978	4,932	4,932	49,320	B	C	C	Yes	No	Yes
26	Palomar Airport Rd/College Blvd	4,714	5,565	5,565	55,650	D	E	E	Yes	Yes	No
27	El Camino Real/Palomar Airport Rd	6,731	7,038	7,038	70,380	D	F	F	Yes	Yes	No
28	I-5 SB Ramps/Poinsettia Ln	2,159	2,818	2,818	28,180	B	C	C	No	No	Yes
29	I-5 NB Ramps/Poinsettia Ln	2,854	3,184	3,184	31,840	B	B	B	Yes	No	Yes
30	Poinsettia Ln/Paseo Del Norte	2,692	3,003	3,003	30,030	C	C	C	Yes	No	Yes
31	Poinsettia Ln/Aviara Pkwy	2,106	2,694	2,694	26,940	C	D	D	No	No	Yes
32	Aviara Pkwy/El Camino Real	4,546	6,029	6,029	60,290	F	E	F	Yes	Yes	No
33	Poinsettia Ln/El Camino Real	3,292	4,109	4,109	41,090	C	C	C	Yes	No	Yes
Maximum					70,380						
Below Screening Criteria?²					Yes						

Notes:

¹ Based on County of San Diego Guidelines for determining Significance and Report Format and Content Requirements: Air Quality, March 19, 2007.

² Based on SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) - the most stringent 1-hour CO standard (20.0 ppm) would not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.

Appendix A

CalEEMod™ Output Files

Cannon Road - Proposed Project Construction (CY 2019) San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3913	3.9412	3.3041	4.6900e-003	0.7290	0.1882	0.9172	0.3323	0.1736	0.5059	0.0000	415.0283	415.0283	0.0904	0.0000	416.9273
2018	1.2277	7.6858	13.3439	0.0287	1.3736	0.2638	1.6374	0.3720	0.2467	0.6187	0.0000	2,298.6427	2,298.6427	0.1275	0.0000	2,301.3208
2019	26.8337	2.9809	4.9344	0.0108	0.4862	0.1146	0.6008	0.1314	0.1068	0.2383	0.0000	855.3310	855.3310	0.0706	0.0000	856.8126
Total	28.4527	14.6079	21.5824	0.0442	2.5887	0.5667	3.1553	0.8358	0.5271	1.3628	0.0000	3,569.0020	3,569.0020	0.2885	0.0000	3,575.0606

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3913	3.9412	3.3041	4.6900e-003	0.3762	0.1882	0.5644	0.1626	0.1736	0.3361	0.0000	415.0280	415.0280	0.0904	0.0000	416.9269
2018	1.2277	7.6858	13.3439	0.0287	1.3736	0.2638	1.6374	0.3720	0.2467	0.6187	0.0000	2,298.6423	2,298.6423	0.1275	0.0000	2,301.3204
2019	26.8337	2.9809	4.9344	0.0108	0.4862	0.1146	0.6008	0.1314	0.1068	0.2383	0.0000	855.3308	855.3308	0.0706	0.0000	856.8123
Total	28.4527	14.6078	21.5824	0.0442	2.2359	0.5667	2.8025	0.6660	0.5271	1.1931	0.0000	3,569.0010	3,569.0010	0.2885	0.0000	3,575.0597

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	13.63	0.00	11.18	20.31	0.00	12.46	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	12.2757	6.8000e-004	0.0734	1.0000e-005	0.0000	2.6000e-004	2.6000e-004	0.0000	2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	12.2757	6.8000e-004	0.0734	1.0000e-005	0.0000	2.6000e-004	2.6000e-004	0.0000	2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4637	27.4637	7.5300e-003	0.0000	27.6219
Total	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4637	27.4637	7.5300e-003	0.0000	27.6219

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091	
Total	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4636	27.4636	7.5300e-003	0.0000	27.6218
Total	0.0304	0.3202	0.2542	3.0000e-004		0.0159	0.0159		0.0149	0.0149	0.0000	27.4636	27.4636	7.5300e-003	0.0000	27.6218

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091
Total	3.5000e-004	4.6000e-004	4.3800e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8082	0.8082	4.0000e-005	0.0000	0.8091

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0351	0.7879	7.8000e-004		0.0551	0.0551		0.0507	0.0507	0.0000	72.6308	72.6308	0.0223	0.0000	73.0981
Total	0.0968	1.0351	0.7879	7.8000e-004	0.3613	0.0551	0.4164	0.1986	0.0507	0.2493	0.0000	72.6308	72.6308	0.0223	0.0000	73.0981

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891
Total	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1626	0.0000	0.1626	0.0894	0.0000	0.0894	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0351	0.7879	7.8000e-004		0.0551	0.0551		0.0507	0.0507	0.0000	72.6307	72.6307	0.0223	0.0000	73.0980
Total	0.0968	1.0351	0.7879	7.8000e-004	0.1626	0.0551	0.2177	0.0894	0.0507	0.1401	0.0000	72.6307	72.6307	0.0223	0.0000	73.0980

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891
Total	1.1200e-003	1.4800e-003	0.0140	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5864	2.5864	1.3000e-004	0.0000	2.5891

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2801	0.0000	0.2801	0.1100	0.0000	0.1100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1830	2.0878	1.4042	1.8500e-003		0.0995	0.0995		0.0916	0.0916	0.0000	171.8218	171.8218	0.0527	0.0000	172.9273
Total	0.1830	2.0878	1.4042	1.8500e-003	0.2801	0.0995	0.3796	0.1100	0.0916	0.2016	0.0000	171.8218	171.8218	0.0527	0.0000	172.9273

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152
Total	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1260	0.0000	0.1260	0.0495	0.0000	0.0495	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1830	2.0878	1.4042	1.8500e-003		0.0995	0.0995		0.0916	0.0916	0.0000	171.8216	171.8216	0.0527	0.0000	172.9271
Total	0.1830	2.0878	1.4042	1.8500e-003	0.1260	0.0995	0.2256	0.0495	0.0916	0.1411	0.0000	171.8216	171.8216	0.0527	0.0000	172.9271

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152
Total	1.8600e-003	2.4700e-003	0.0234	6.0000e-005	4.8100e-003	4.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	4.3106	4.3106	2.2000e-004	0.0000	4.3152

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0538
Total	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0538

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2653	0.3928	7.2000e-004	0.0198	3.7900e-003	0.0236	5.6500e-003	3.4900e-003	9.1400e-003	0.0000	64.4254	64.4254	4.9000e-004	0.0000	64.4356	
Worker	0.0229	0.0304	0.2873	7.3000e-004	0.0592	4.4000e-004	0.0596	0.0157	4.1000e-004	0.0161	0.0000	53.0206	53.0206	2.7000e-003	0.0000	53.0772	
Total	0.0546	0.2957	0.6801	1.4500e-003	0.0789	4.2300e-003	0.0832	0.0214	3.9000e-003	0.0253	0.0000	117.4460	117.4460	3.1900e-003	0.0000	117.5128	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0537
Total	0.0233	0.1980	0.1360	2.0000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	17.9609	17.9609	4.4200e-003	0.0000	18.0537

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2653	0.3928	7.2000e-004	0.0198	3.7900e-003	0.0236	5.6500e-003	3.4900e-003	9.1400e-003	0.0000	64.4254	64.4254	4.9000e-004	0.0000	64.4356
Worker	0.0229	0.0304	0.2873	7.3000e-004	0.0592	4.4000e-004	0.0596	0.0157	4.1000e-004	0.0161	0.0000	53.0206	53.0206	2.7000e-003	0.0000	53.0772
Total	0.0546	0.2957	0.6801	1.4500e-003	0.0789	4.2300e-003	0.0832	0.0214	3.9000e-003	0.0253	0.0000	117.4460	117.4460	3.1900e-003	0.0000	117.5128

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5168	4.1678	6.5339	0.0125	0.3438	0.0613	0.4051	0.0984	0.0564	0.1548	0.0000	1,101.743 3	1,101.743 3	8.2900e- 003	0.0000	1,101.917 3
Worker	0.3627	0.4825	4.5220	0.0127	1.0298	7.5200e- 003	1.0373	0.2736	6.9600e- 003	0.2806	0.0000	887.9150	887.9150	0.0436	0.0000	888.8311
Total	0.8795	4.6503	11.0559	0.0252	1.3736	0.0688	1.4424	0.3720	0.0634	0.4354	0.0000	1,989.658 2	1,989.658 2	0.0519	0.0000	1,990.748 4

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e- 003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	0.3483	3.0355	2.2880	3.5000e- 003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5168	4.1678	6.5339	0.0125	0.3438	0.0613	0.4051	0.0984	0.0564	0.1548	0.0000	1,101.743 3	1,101.743 3	8.2900e- 003	0.0000	1,101.917 3
Worker	0.3627	0.4825	4.5220	0.0127	1.0298	7.5200e- 003	1.0373	0.2736	6.9600e- 003	0.2806	0.0000	887.9150	887.9150	0.0436	0.0000	888.8311
Total	0.8795	4.6503	11.0559	0.0252	1.3736	0.0688	1.4424	0.3720	0.0634	0.4354	0.0000	1,989.658 2	1,989.658 2	0.0519	0.0000	1,990.748 4

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8805	0.7191	1.1300e- 003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3316	98.3316	0.0239	0.0000	98.8340
Total	0.0988	0.8805	0.7191	1.1300e- 003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3316	98.3316	0.0239	0.0000	98.8340

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1553	1.2207	2.0069	4.0200e-003	0.1106	0.0183	0.1290	0.0317	0.0169	0.0485	0.0000	348.4742	348.4742	2.6000e-003	0.0000	348.5289
Worker	0.1083	0.1435	1.3387	4.0800e-003	0.3314	2.4000e-003	0.3338	0.0881	2.2300e-003	0.0903	0.0000	275.4277	275.4277	0.0132	0.0000	275.7051
Total	0.2636	1.3642	3.3456	8.1000e-003	0.4421	0.0207	0.4628	0.1197	0.0191	0.1388	0.0000	623.9020	623.9020	0.0158	0.0000	624.2340

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8805	0.7191	1.1300e-003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3315	98.3315	0.0239	0.0000	98.8339
Total	0.0988	0.8805	0.7191	1.1300e-003		0.0540	0.0540		0.0508	0.0508	0.0000	98.3315	98.3315	0.0239	0.0000	98.8339

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1553	1.2207	2.0069	4.0200e-003	0.1106	0.0183	0.1290	0.0317	0.0169	0.0485	0.0000	348.4742	348.4742	2.6000e-003	0.0000	348.5289
Worker	0.1083	0.1435	1.3387	4.0800e-003	0.3314	2.4000e-003	0.3338	0.0881	2.2300e-003	0.0903	0.0000	275.4277	275.4277	0.0132	0.0000	275.7051
Total	0.2636	1.3642	3.3456	8.1000e-003	0.4421	0.0207	0.4628	0.1197	0.0191	0.1388	0.0000	623.9020	623.9020	0.0158	0.0000	624.2340

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0642	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1776	90.1776	0.0285	0.0000	90.7768
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0650	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1776	90.1776	0.0285	0.0000	90.7768

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030
Total	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0642	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1775	90.1775	0.0285	0.0000	90.7767
Paving	8.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0650	0.6721	0.6464	1.0000e-003		0.0364	0.0364		0.0335	0.0335	0.0000	90.1775	90.1775	0.0285	0.0000	90.7767

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030
Total	1.7700e-003	2.3400e-003	0.0219	7.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4700e-003	0.0000	4.4985	4.4985	2.2000e-004	0.0000	4.5030

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.3853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666
Total	26.3919	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0127	0.0168	0.1563	4.8000e-004	0.0387	2.8000e-004	0.0390	0.0103	2.6000e-004	0.0106	0.0000	32.1659	32.1659	1.5400e-003	0.0000	32.1983	
Total	0.0127	0.0168	0.1563	4.8000e-004	0.0387	2.8000e-004	0.0390	0.0103	2.6000e-004	0.0106	0.0000	32.1659	32.1659	1.5400e-003	0.0000	32.1983	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.3853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666
Total	26.3919	0.0450	0.0451	7.0000e-005		3.1500e-003	3.1500e-003		3.1500e-003	3.1500e-003	0.0000	6.2555	6.2555	5.3000e-004	0.0000	6.2666

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Unmitigated	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6302					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Total	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6302					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494
Total	12.2757	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1414	0.1414	3.8000e-004	0.0000	0.1494

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Cannon Road - Proposed Project Construction (CY 2019)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.1012	69.6666	100.2332	0.2254	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	20,355.9713	20,355.9713	1.9425	0.0000	20,396.7629
2018	9.1639	57.6123	93.9712	0.2252	10.7713	2.0198	12.7911	2.9109	1.8885	4.7994	0.0000	19,854.7804	19,854.7804	1.0764	0.0000	19,877.3846
2019	1,077.7485	52.2841	88.7421	0.2251	10.7710	1.7773	12.5482	2.9108	1.6615	4.5723	0.0000	19,379.0001	19,379.0001	1.0420	0.0000	19,400.8817
Total	1,097.0136	179.5630	282.9464	0.6757	39.7564	7.1154	46.3087	15.7916	6.6029	21.8764	0.0000	59,589.7518	59,589.7518	4.0608	0.0000	59,675.0292

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.1012	69.6666	100.2332	0.2254	10.7716	3.3184	13.1154	4.5080	3.0529	7.0429	0.0000	20,355.9713	20,355.9713	1.9425	0.0000	20,396.7629
2018	9.1639	57.6123	93.9712	0.2252	10.7713	2.0198	12.7911	2.9109	1.8885	4.7994	0.0000	19,854.7804	19,854.7804	1.0764	0.0000	19,877.3846
2019	1,077.7485	52.2841	88.7421	0.2251	10.7710	1.7773	12.5482	2.9108	1.6615	4.5723	0.0000	19,379.0000	19,379.0000	1.0420	0.0000	19,400.8817
Total	1,097.0136	179.5630	282.9464	0.6757	32.3139	7.1154	38.4548	10.3297	6.6029	16.4145	0.0000	59,589.7517	59,589.7517	4.0608	0.0000	59,675.0292

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	18.72	0.00	16.96	34.59	0.00	24.97	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	67.3031	7.5800e-003	0.8157	6.0000e-005	0.0000	2.9300e-003	2.9300e-003	0.0000	2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003	0.0000	1.8300

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	67.3031	7.5800e-003	0.8157	6.0000e-005	0.0000	2.9300e-003	2.9300e-003	0.0000	2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003	0.0000	1.8300

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211
Total	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073		4,059.7211
Total	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073		4,059.7211

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265		4,028.8432

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003			150.4553
Total	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003			150.4553

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000	
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265			4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	8.1298	2.7542	10.8840	4.4688	2.5339	7.0027	0.0000	4,003.0859	4,003.0859	1.2265			4,028.8432

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003			150.4553
Total	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003			150.4553

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					9.3362	0.0000	9.3362	3.6681	0.0000	3.6681			0.0000				0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344			6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	9.3362	3.3172	12.6533	3.6681	3.0518	6.7199		6,313.3690	6,313.3690	1.9344			6,353.9915

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2013	0.0000	4.2013	1.6506	0.0000	1.6506			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	4.2013	3.3172	7.5185	1.6506	3.0518	4.7024	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003			167.1726
Total	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003			167.1726

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497			2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497			2,653.4490

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.8725	34.3239	42.2875	0.0962	2.6883	0.5038	3.1921	0.7670	0.4634	1.2303		9,499.594 4	9,499.594 4	0.0706			9,501.076 5
Worker	3.1263	3.6684	39.8165	0.1024	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		8,216.571 6	8,216.571 6	0.3962			8,224.891 4
Total	6.9989	37.9923	82.1040	0.1986	10.7716	0.5626	11.3342	2.9111	0.5176	3.4286		17,716.16 60	17,716.16 60	0.4668			17,725.96 79

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497			2,653.449 0
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497			2,653.449 0

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.8725	34.3239	42.2875	0.0962	2.6883	0.5038	3.1921	0.7670	0.4634	1.2303		9,499.594 4	9,499.594 4	0.0706			9,501.076 5
Worker	3.1263	3.6684	39.8165	0.1024	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		8,216.571 6	8,216.571 6	0.3962			8,224.891 4
Total	6.9989	37.9923	82.1040	0.1986	10.7716	0.5626	11.3342	2.9111	0.5176	3.4286		17,716.16 60	17,716.16 60	0.4668			17,725.96 79

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387			2,623.351 7
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387			2,623.351 7

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.6452	31.0038	40.2961	0.0960	2.6880	0.4679	3.1558	0.7668	0.4303	1.1972		9,336.470 0	9,336.470 0	0.0692			9,337.922 8
Worker	2.8500	3.3477	36.1424	0.1024	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,908.371 4	7,908.371 4	0.3685			7,916.110 1
Total	6.4953	34.3515	76.4385	0.1984	10.7713	0.5255	11.2968	2.9109	0.4837	3.3946		17,244.84 14	17,244.84 14	0.4377			17,254.03 29

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.6452	31.0038	40.2961	0.0960	2.6880	0.4679	3.1558	0.7668	0.4303	1.1972		9,336.470 0	9,336.470 0	0.0692			9,337.922 8
Worker	2.8500	3.3477	36.1424	0.1024	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,908.371 4	7,908.371 4	0.3685			7,916.110 1
Total	6.4953	34.3515	76.4385	0.1984	10.7713	0.5255	11.2968	2.9109	0.4837	3.3946		17,244.84 14	17,244.84 14	0.4377			17,254.03 29

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279			2,593.947 9
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279			2,593.947 9

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.4133	28.2254	38.2896	0.0959	2.6876	0.4350	3.1226	0.7667	0.4001	1.1668		9,175.6584	9,175.6584	0.0675			9,177.0751
Worker	2.6489	3.0937	33.3322	0.1024	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,622.5799	7,622.5799	0.3466			7,629.8587
Total	6.0622	31.3190	71.6218	0.1983	10.7710	0.4922	11.2632	2.9108	0.4532	3.3640		16,798.2383	16,798.2383	0.4141			16,806.9338

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.4133	28.2254	38.2896	0.0959	2.6876	0.4350	3.1226	0.7667	0.4001	1.1668		9,175.6584	9,175.6584	0.0675			9,177.0751
Worker	2.6489	3.0937	33.3322	0.1024	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,622.5799	7,622.5799	0.3466			7,629.8587
Total	6.0622	31.3190	71.6218	0.1983	10.7710	0.4922	11.2632	2.9108	0.4532	3.3640		16,798.2383	16,798.2383	0.4141			16,806.9338

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.4454	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003			116.3088
Total	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003			116.3088

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.4454	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
Total	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	1,077.2182	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694			1,527.522 5
Total	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694			1,527.522 5

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	1,076.951 7					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e- 003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473
Total	1,077.218 2	1.8354	1.8413	2.9700e- 003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473

3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694			1,527.522 5
Total	0.5303	0.6194	6.6732	0.0205	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,526.065 3	1,526.065 3	0.0694			1,527.522 5

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Unmitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Total	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Total	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Cannon Road - Proposed Project Construction (CY 2019) San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	0.00	0.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use based on site acreage of 35.9.

Construction Phase - Construction schedule based on Project Description.

Vehicle Trips - Operational emissions evaluated separately.

Consumer Products - Operational emissions evaluated separately.

Landscape Equipment - Operational emissions evaluated separately.

Energy Use - Operational emissions evaluated separately.

Water And Wastewater - Operational emissions evaluated separately.

Solid Waste - Operational emissions evaluated separately.

Construction Off-road Equipment Mitigation - Watering 2 times/day for fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	49.00
tblConstructionPhase	NumDays	740.00	360.00
tblConstructionPhase	NumDays	50.00	15.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	90.00
tblConstructionPhase	NumDays	30.00	40.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	LightingElect	6.99	0.00
tblEnergyUse	LightingElect	7.79	0.00
tblEnergyUse	LightingElect	2.63	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24E	3.16	0.00
tblEnergyUse	NT24E	25.54	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	NT24NG	1.09	0.00

tblEnergyUse	NT24NG	15.42	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24E	3.89	0.00
tblEnergyUse	T24E	3.97	0.00
tblEnergyUse	T24NG	4.54	0.00
tblEnergyUse	T24NG	1.20	0.00
tblEnergyUse	T24NG	10.21	0.00
tblGrading	AcresOfGrading	150.00	187.50
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	0.00
tblSolidWaste	SolidWasteGenerationRate	259.44	0.00
tblVehicleTrips	ST_TR	1.80	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	SU_TR	1.80	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	WD_TR	1.80	0.00
tblVehicleTrips	WD_TR	42.94	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblWater	IndoorWaterUseRate	22,590,082.22	0.00
tblWater	IndoorWaterUseRate	36,147,390.48	0.00

tblWater	IndoorWaterUseRate	5,670,337.88	0.00
tblWater	OutdoorWaterUseRate	1,441,920.14	0.00
tblWater	OutdoorWaterUseRate	22,154,852.23	0.00
tblWater	OutdoorWaterUseRate	175,371.27	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.8716	69.6757	114.0496	0.2186	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	19,782.3546	19,782.3546	1.9425	0.0000	19,823.1462
2018	9.8577	58.7400	107.2784	0.2184	10.7713	2.0245	12.7958	2.9109	1.8928	4.8037	0.0000	19,300.6354	19,300.6354	1.0784	0.0000	19,323.2809
2019	1,077.7759	53.3013	101.6304	0.2183	10.7710	1.7815	12.5525	2.9108	1.6654	4.5762	0.0000	18,843.0242	18,843.0242	1.0440	0.0000	18,864.9480
Total	1,098.5052	181.7170	322.9584	0.6553	39.7564	7.1244	46.3177	15.7916	6.6111	21.8846	0.0000	57,926.0143	57,926.0143	4.0648	0.0000	58,011.3752

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	10.8716	69.6757	114.0496	0.2186	10.7716	3.3184	13.1205	4.5080	3.0529	7.0429	0.0000	19,782.3546	19,782.3546	1.9425	0.0000	19,823.1462
2018	9.8577	58.7400	107.2784	0.2184	10.7713	2.0245	12.7958	2.9109	1.8928	4.8037	0.0000	19,300.6354	19,300.6354	1.0784	0.0000	19,323.2809
2019	1,077.7759	53.3013	101.6304	0.2183	10.7710	1.7815	12.5525	2.9108	1.6654	4.5762	0.0000	18,843.0242	18,843.0242	1.0440	0.0000	18,864.9480
Total	1,098.5052	181.7170	322.9584	0.6553	32.3139	7.1244	38.4688	10.3297	6.6111	16.4227	0.0000	57,926.0143	57,926.0143	4.0648	0.0000	58,011.3752

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	18.72	0.00	16.95	34.59	0.00	24.96	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	67.3031	7.5800e-003	0.8157	6.0000e-005	0.0000	2.9300e-003	2.9300e-003	0.0000	2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003	0.0000	1.8300

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	67.3031	7.5800e-003	0.8157	6.0000e-005	0.0000	2.9300e-003	2.9300e-003	0.0000	2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003	0.0000	1.8300

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	7/21/2017	5	15	
2	Site Preparation	Site Preparation	7/22/2017	9/15/2017	5	40	
3	Grading	Grading	9/16/2017	12/8/2017	5	60	
4	Building Construction	Building Construction	12/9/2017	4/26/2019	5	360	
5	Paving	Paving	4/27/2019	8/30/2019	5	90	
6	Architectural Coating	Architectural Coating	8/31/2019	11/7/2019	5	49	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,415,575; Non-Residential Outdoor: 1,138,525 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	984.00	405.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	197.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211
Total	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003			117.7491
Total	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003			117.7491

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073			4,059.7211
Total	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073			4,059.7211

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003			117.7491
Total	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003			117.7491

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000				0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265			4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265			4,028.8432

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
Total	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	8.1298	2.7542	10.8840	4.4688	2.5339	7.0027	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003			141.2989
Total	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003			141.2989

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					9.3362	0.0000	9.3362	3.6681	0.0000	3.6681			0.0000			0.0000	
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344			6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	9.3362	3.3172	12.6533	3.6681	3.0518	6.7199		6,313.3690	6,313.3690	1.9344			6,353.9915

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003			156.9987
Total	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003			156.9987

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					4.2013	0.0000	4.2013	1.6506	0.0000	1.6506			0.0000			0.0000	
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344			6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	4.2013	3.3172	7.5185	1.6506	3.0518	4.7024	0.0000	6,313.3690	6,313.3690	1.9344			6,353.9915

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003			156.9987
Total	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003			156.9987

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497			2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497			2,653.4490

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	4.4659	35.1367	57.4292	0.0957	2.6883	0.5089	3.1972	0.7670	0.4681	1.2350		9,426.5315	9,426.5315	0.0725			9,428.0538
Worker	3.3033	4.1161	38.4912	0.0961	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		7,716.0178	7,716.0178	0.3962			7,724.3375
Total	7.7692	39.2528	95.9204	0.1918	10.7716	0.5677	11.3393	2.9111	0.5223	3.4333		17,142.5493	17,142.5493	0.4687			17,152.3913

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497			2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497			2,653.4490

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	4.4659	35.1367	57.4292	0.0957	2.6883	0.5089	3.1972	0.7670	0.4681	1.2350		9,426.5315	9,426.5315	0.0725			9,428.0538
Worker	3.3033	4.1161	38.4912	0.0961	8.0833	0.0588	8.1421	2.1441	0.0542	2.1983		7,716.0178	7,716.0178	0.3962			7,724.3375
Total	7.7692	39.2528	95.9204	0.1918	10.7716	0.5677	11.3393	2.9111	0.5223	3.4333		17,142.5493	17,142.5493	0.4687			17,152.3913

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	4.1870	31.7230	54.9838	0.0955	2.6880	0.4725	3.1605	0.7668	0.4346	1.2015		9,264.489 2	9,264.489 2	0.0711			9,265.983 2
Worker	3.0020	3.7562	34.7619	0.0961	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,426.207 3	7,426.207 3	0.3685			7,433.946 0
Total	7.1890	35.4792	89.7457	0.1916	10.7713	0.5302	11.3015	2.9109	0.4880	3.3989		16,690.69 65	16,690.69 65	0.4397			16,699.92 92

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	4.1870	31.7230	54.9838	0.0955	2.6880	0.4725	3.1605	0.7668	0.4346	1.2015		9,264.489 2	9,264.489 2	0.0711			9,265.983 2
Worker	3.0020	3.7562	34.7619	0.0961	8.0833	0.0577	8.1410	2.1441	0.0534	2.1974		7,426.207 3	7,426.207 3	0.3685			7,433.946 0
Total	7.1890	35.4792	89.7457	0.1916	10.7713	0.5302	11.3015	2.9109	0.4880	3.3989		16,690.69 65	16,690.69 65	0.4397			16,699.92 92

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279			2,593.947 9
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279			2,593.947 9

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.9040	28.8655	52.5716	0.0954	2.6876	0.4392	3.1269	0.7667	0.4040	1.1707		9,104.7640	9,104.7640	0.0695			9,106.2228
Worker	2.7860	3.4708	31.9385	0.0961	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,157.4985	7,157.4985	0.3466			7,164.7774
Total	6.6900	32.3363	84.5101	0.1915	10.7710	0.4965	11.2674	2.9108	0.4571	3.3679		16,262.2625	16,262.2625	0.4161			16,271.0002

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	3.9040	28.8655	52.5716	0.0954	2.6876	0.4392	3.1269	0.7667	0.4040	1.1707		9,104.7640	9,104.7640	0.0695			9,106.2228
Worker	2.7860	3.4708	31.9385	0.0961	8.0833	0.0573	8.1406	2.1441	0.0531	2.1972		7,157.4985	7,157.4985	0.3466			7,164.7774
Total	6.6900	32.3363	84.5101	0.1915	10.7710	0.4965	11.2674	2.9108	0.4571	3.3679		16,262.2625	16,262.2625	0.4161			16,271.0002

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.4454	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003			109.2192
Total	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003			109.2192

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.4454	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003			109.2192
Total	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003			109.2192

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238			281.9473
Total	1,077.2182	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238			281.9473

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694			1,434.4117
Total	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694			1,434.4117

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	1,076.9517					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473
Total	1,077.2182	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			281.9473

3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694			1,434.4117
Total	0.5578	0.6949	6.3942	0.0192	1.6183	0.0115	1.6298	0.4293	0.0106	0.4399		1,432.9545	1,432.9545	0.0694			1,434.4117

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	66	17	17
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Unmitigated	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Total	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	14.4577					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	52.7681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300
Total	67.3031	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		1.7315	1.7315	4.6900e-003		1.8300

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Cannon Road - Specific Plan Operational AQ (CY 2019)
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses based on Specific Plan.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Energy Mitigation - 30% reduction to update to Title 24 - 2013 building standards. Using Energy Star appliances.

Water Mitigation - According to water study, 16.7% of outdoor water use will be reclaimed water.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	298.00
tblSolidWaste	SolidWasteGenerationRate	259.44	151.00
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tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
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tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	51.0067	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004							
Energy	0.0156	0.1421	0.1193	8.5000e-004		0.0108	0.0108		0.0108	0.0108							
Mobile	14.1966	36.7911	160.2868	0.4434	30.7064	0.5208	31.2272	8.2126	0.4803	8.6930							
Waste						0.0000	0.0000		0.0000	0.0000							
Water						0.0000	0.0000		0.0000	0.0000							
Total	65.2190	36.9339	160.4795	0.4443	30.7064	0.5318	31.2382	8.2126	0.4914	8.7040							

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	:: :: ::
Total	

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.1966	36.7911	160.2868	0.4434	30.7064	0.5208	31.2272	8.2126	0.4803	8.6930						
Unmitigated	14.1966	36.7911	160.2868	0.4434	30.7064	0.5208	31.2272	8.2126	0.4803	8.6930						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
NaturalGas Mitigated	0.0135	0.1231	0.1034	7.4000e-004		9.3600e-003	9.3600e-003		9.3600e-003	9.3600e-003							
NaturalGas Unmitigated	0.0156	0.1421	0.1193	8.5000e-004		0.0108	0.0108		0.0108	0.0108							
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000							
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000							

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Movie Theater (No Matinee)	601290	3.2400e-003	0.0295	0.0248	1.8000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003							
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Regional Shopping Center	1.11752e+006	6.0300e-003	0.0548	0.0460	3.3000e-004		4.1600e-003	4.1600e-003		4.1600e-003	4.1600e-003							
Supermarket	1.17898e+006	6.3600e-003	0.0578	0.0486	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003							
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Total		0.0156	0.1420	0.1193	8.6000e-004		0.0108	0.0108		0.0108	0.0108							

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Movie Theater (No Matinee)	531828	2.8700e-003	0.0261	0.0219	1.6000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003							
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Regional Shopping Center	941840	5.0800e-003	0.0462	0.0388	2.8000e-004		3.5100e-003	3.5100e-003		3.5100e-003	3.5100e-003							
Supermarket	1.03808e+006	5.6000e-003	0.0509	0.0427	3.1000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003							
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Total		0.0136	0.1231	0.1034	7.5000e-004		9.3600e-003	9.3600e-003		9.3600e-003	9.3600e-003							

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	459000				
Parking Lot	176000				
Regional Shopping Center	6.85152e+006				
Supermarket	1.7158e+006				
Unenclosed Parking Structure	4.4205e+006				
User Defined Recreational	0				
Total					

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Movie Theater (No Matinee)	431842				
Parking Lot	176000				
Regional Shopping Center	6.17808e+006				
Supermarket	1.50376e+006				
Unenclosed Parking Structure	4.4205e+006				
User Defined Recreational	0				
Total					

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	51.0067	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004							
Unmitigated	51.0067	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004							

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	11.4959					0.0000	0.0000		0.0000	0.0000							
Consumer Products	39.5039					0.0000	0.0000		0.0000	0.0000							
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004							
Total	51.0067	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004							

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.4959					0.0000	0.0000		0.0000	0.0000						
Consumer Products	39.5039					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.9600e-003	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004						
Total	51.0067	6.8000e-004	0.0734	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				
Mitigated				

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	3.84948 / 0.245811				
Parking Lot	0 / 0				
Regional Shopping Center	25.3779 / 15.554				
Supermarket	3.58299 / 0.110802				
Unenclosed Parking Structure	0 / 0				
User Defined Recreational	0.218206 / 0				
Total					

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Movie Theater (No Matinee)	3.84948 / 0.240701				
Parking Lot	0 / 0				
Regional Shopping Center	25.3779 / 15.2307				
Supermarket	3.58299 / 0.108499				
Unenclosed Parking Structure	0 / 0				
User Defined Recreational	0.218206 / 0				
Total					

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				
Unmitigated				

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0				
Parking Lot	0				
Regional Shopping Center	298				
Supermarket	151				
Unenclosed Parking Structure	0				
User Defined Recreational	189				
Total					

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Movie Theater (No Matinee)	0				
Parking Lot	0				
Regional Shopping Center	298				
Supermarket	151				
Unenclosed Parking Structure	0				
User Defined Recreational	189				
Total					

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	:	:	:	:

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	157.6 / 120.1	:	:	:	:
Total					

Cannon Road - Specific Plan Operational AQ (CY 2019)
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

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Vehicle Trips - Trip rates based on traffic study.

Water And Wastewater - Based on water study.

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tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Energy	0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						
Mobile	96.3574	234.7046	1,077.2759	3.1301	212.3584	3.5167	215.8751	56.6868	3.2436	59.9303						
Total	375.9711	235.4905	1,078.7454	3.1348	212.3584	3.5788	215.9371	56.6868	3.3057	59.9924						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Energy	0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						
Mobile	96.3574	234.7046	1,077.2759	3.1301	212.3584	3.5167	215.8751	56.6868	3.2436	59.9303						
Total	375.9597	235.3868	1,078.6583	3.1342	212.3584	3.5709	215.9293	56.6868	3.2978	59.9845						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.04	0.01	0.02	0.00	0.22	0.00	0.00	0.24	0.01	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	96.3574	234.7046	1,077.2759	3.1301	212.3584	3.5167	215.8751	56.6868	3.2436	59.9303						
Mitigated	96.3574	234.7046	1,077.2759	3.1301	212.3584	3.5167	215.8751	56.6868	3.2436	59.9303						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						
NaturalGas Unmitigated	0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1647.37	0.0178	0.1615	0.1357	9.7000e-004		0.0123	0.0123		0.0123	0.0123						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	3061.7	0.0330	0.3002	0.2521	1.8000e-003		0.0228	0.0228		0.0228	0.0228						
Supermarket	3230.08	0.0348	0.3167	0.2660	1.9000e-003		0.0241	0.0241		0.0241	0.0241						
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.45706	0.0157	0.1429	0.1200	8.6000e-004		0.0109	0.0109		0.0109	0.0109						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	2.58038	0.0278	0.2530	0.2125	1.5200e-003		0.0192	0.0192		0.0192	0.0192						
Supermarket	2.84406	0.0307	0.2788	0.2342	1.6700e-003		0.0212	0.0212		0.0212	0.0212						
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Mitigated	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	62.9912					0.0000	0.0000		0.0000	0.0000						
Consumer Products	216.4596					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Total	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	62.9912					0.0000	0.0000		0.0000	0.0000							
Consumer Products	216.4596					0.0000	0.0000		0.0000	0.0000							
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003							
Total	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003							

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Cannon Road - Specific Plan Operational AQ (CY 2019)
San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	500.00	Space	0.67	200,000.00	0
Unenclosed Parking Structure	4,202.00	Space	5.64	1,680,800.00	0
Movie Theater (No Matinee)	2,500.00	Seat	2.82	51,000.00	0
User Defined Recreational	175.60	User Defined Unit	175.60	7,649,136.00	0
Regional Shopping Center	488.00	1000sqft	24.44	488,000.00	0
Supermarket	46.00	1000sqft	2.31	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses based on Specific Plan.

Construction Phase - Construction emissions evaluated separately.

Off-road Equipment -

Vehicle Trips - Trip rates based on traffic study.

Water And Wastewater - Based on water study.

Solid Waste - Passive Parks/AG waste considered 0. User Defined Recreational includes waste for movie theater.

Land Use Change -

Energy Mitigation - 30% reduction to update to Title 24 - 2013 building standards. Using Energy Star appliances.

Water Mitigation - According to water study, 16.7% of outdoor water use will be reclaimed water.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	56,250.00	51,000.00
tblLandUse	LandUseSquareFeet	0.00	7,649,136.00
tblLandUse	LotAcreage	4.50	0.67
tblLandUse	LotAcreage	37.82	5.64
tblLandUse	LotAcreage	1.29	2.82
tblLandUse	LotAcreage	11.20	24.44
tblLandUse	LotAcreage	1.06	2.31
tblLandUse	LotAcreage	0.00	175.60
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	512.40	298.00
tblSolidWaste	SolidWasteGenerationRate	259.44	151.00
tblSolidWaste	SolidWasteGenerationRate	0.00	189.00
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77

tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CC_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CNW_TL	7.30	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TL	9.50	9.77
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	17.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.80	1.04

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Energy	0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						
Mobile	101.4931	249.5012	1,106.4450	2.9733	212.3584	3.5273	215.8856	56.6868	3.2533	59.9401						
Total	381.1069	250.2871	1,107.9145	2.9780	212.3584	3.5893	215.9477	56.6868	3.3154	60.0021						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Energy	0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						
Mobile	101.4931	249.5012	1,106.4450	2.9733	212.3584	3.5273	215.8856	56.6868	3.2533	59.9401						
Total	381.0954	250.1834	1,107.8274	2.9774	212.3584	3.5815	215.9398	56.6868	3.3075	59.9943						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.04	0.01	0.02	0.00	0.22	0.00	0.00	0.24	0.01	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	No Phase	Trenching	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	101.4931	249.5012	1,106.4450	2.9733	212.3584	3.5273	215.8856	56.6868	3.2533	59.9401						
Mitigated	101.4931	249.5012	1,106.4450	2.9733	212.3584	3.5273	215.8856	56.6868	3.2533	59.9401						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	2,600.00	2,600.00	2600.00	9,246,328	9,246,328
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,274.40	17,777.84	8979.20	52,393,677	52,393,677
Supermarket	4,086.18	7,097.80	6652.06	17,365,193	17,365,193
Unenclosed Parking Structure	0.00	0.00	0.00		
User Defined Recreational	746.30	746.30	746.30	2,654,052	2,654,052
Total	22,706.88	28,221.94	18,977.56	81,659,251	81,659,251

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	9.77	9.77	9.77	1.80	79.20	19.00	100	0	0
Parking Lot	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
Regional Shopping Center	9.77	9.77	9.77	16.30	64.70	19.00	100	0	0
Supermarket	9.77	9.77	9.77	6.50	74.50	19.00	100	0	0
Unenclosed Parking Structure	9.77	9.77	9.77	0.00	0.00	0.00	100	0	0
User Defined Recreational	9.77	9.77	9.77	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						
NaturalGas Unmitigated	0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1647.37	0.0178	0.1615	0.1357	9.7000e-004		0.0123	0.0123		0.0123	0.0123						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	3061.7	0.0330	0.3002	0.2521	1.8000e-003		0.0228	0.0228		0.0228	0.0228						
Supermarket	3230.08	0.0348	0.3167	0.2660	1.9000e-003		0.0241	0.0241		0.0241	0.0241						
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0856	0.7784	0.6538	4.6700e-003		0.0592	0.0592		0.0592	0.0592						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Movie Theater (No Matinee)	1.45706	0.0157	0.1429	0.1200	8.6000e-004		0.0109	0.0109		0.0109	0.0109						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	2.58038	0.0278	0.2530	0.2125	1.5200e-003		0.0192	0.0192		0.0192	0.0192						
Supermarket	2.84406	0.0307	0.2788	0.2342	1.6700e-003		0.0212	0.0212		0.0212	0.0212						
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0742	0.6747	0.5667	4.0500e-003		0.0513	0.0513		0.0513	0.0513						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Unmitigated	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	62.9912					0.0000	0.0000		0.0000	0.0000						
Consumer Products	216.4596					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						
Total	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	62.9912					0.0000	0.0000		0.0000	0.0000							
Consumer Products	216.4596					0.0000	0.0000		0.0000	0.0000							
Landscaping	0.0773	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003							
Total	279.5281	7.5800e-003	0.8157	6.0000e-005		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003							

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Appendix B
SCREEN3 Analysis File

Table B-1. Maximum Dispersion Concentrations from On-Site Construction

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

SCREEN3 Dispersion Factor ($\mu\text{g}/\text{m}^3$)/(g/s):	15.23
Specific Plan Construction Area (m^2):	175,375

Pollutant	Maximum On-Site Construction Emissions ¹		Maximum Dispersion Concentrations ²
	lb/day	g/s	$\mu\text{g}/\text{m}^3$
NO _x	70	1.1	17
CO	115	1.8	28
VOC	1,078	17.0	259
SO ₂	0.23	0.004	0.1
Fugitive PM ₁₀	11	0.2	2.6
Exhaust PM ₁₀	3.3	0.1	0.8
Fugitive PM _{2.5}	4.5	0.1	1.1
Exhaust PM _{2.5}	3.1	0.05	0.7

Note:

¹ Construction emissions were estimated using CalEEMod™ version 2013.2.2. Onsite fugitive PM₁₀/PM_{2.5} emissions are assumed to be controlled by watering two times per day.

² Maximum dispersion concentrations were calculated based on a dispersion factor derived from SCREEN3 modeling result for the Proposed Specific Plan Site.

Abbreviations:

$\mu\text{g}/\text{m}^3$ - microgram per cubic meter

CalEEMod - CALifornia Emissions Estimator MODeI

CO - carbon monoxide

g - gram

lb - pounds

m^2 - square meter

NO_x - nitrogen oxides

PM₁₀ - particulate matter

PM_{2.5} - particulate matter

s - second

SO₂ - sulfur dioxide

VOC - volatile organic compounds

Table B-2. Summary of 2011 - 2013 Ambient Air Monitoring Results¹

Agua Hedionda 85/15 Specific Plan
Carlsbad, California

Pollutant	Averaging Time	2011	2012	2013	Maximum
CO (ppm) ²	1-hour maximum	3.5	4.4	3.2	4.4
	8-hour maximum	2.3	3.8	2.6	3.8
O ₃ (ppm) ³	1-hour maximum	0.09	0.09	0.08	0.09
	8-hour maximum	0.07	0.08	0.07	0.08
NO ₂ (ppm)	1-hour maximum ³	0.066	0.061	0.081	0.081
	98th Percentile 1-hour ⁴	0.046	0.046	0.05	0.05
	Annual Arithmetic Mean (AAM) ³	0.007	0.007	0.007	0.007
SO ₂ (ppm) ⁵	1-hour maximum	0.001	0.002	0.0065	0.0065
	99th Percentile 1-hour	0.001	0.001	0.001	0.001
	24-hour maximum	0.001	0.001	0.001	0.001
PM ₁₀ (µg/m ³) ⁶	24-hour maximum	40	33	80	80
	Annual average	18.8	18	23.1	23.1
PM _{2.5} (µg/m ³) ⁶	24-hour maximum	27	71	56.3	71
	Annual average	10.4	10.5	10.5	10.5

Notes:

¹ Monitoring station locations: <http://sd.sdapcd.org/Airvision/> and the type of pollutant monitored.

² Source: <http://www.epa.gov/airdata> for *Escondido* monitoring station closest to Specific Plan Site.

³ Source: <http://www.sdapcd.org/info/reports/5-year-summary.pdf> for *Camp Pendleton* monitoring station.

⁴ Source: <http://www.epa.gov/airdata> for *Camp Pendleton* monitoring station.

⁵ Source: <http://www.epa.gov/airdata> for *El Cajon* monitoring station.

⁶ Source: <http://www.sdapcd.org/info/reports/5-year-summary.pdf> for *Escondido* monitoring station (that measures PM).

Abbreviations:

µg/m³ - microgram per cubic meter

CO - carbon monoxide

O₃ - ozone

NO_x - nitrogen oxides

PM - particulate matter

PM₁₀ - particulate matter at 10 microns or smaller

PM_{2.5} - particulate matter at 2.5 microns or smaller

SO₂ - sulfur dioxide

Table B-3. Ambient Background Concentration

Agua Hedionda 85/15 Specific Plan

Carlsbad, California

Pollutant	Averaging Time	Maximum Concentration (ppm)	Maximum Concentration ($\mu\text{g}/\text{m}^3$)
CO	1-hour maximum	4.4	5,041
	8-hour maximum	3.8	4,353
O ₃	1-hour maximum	0.09	177
	8-hour maximum	0.08	157
NO ₂	1-hour maximum	0.081	152
	98th Percentile 1-hour	0.05	94
	Annual Arithmetic Mean (AAM)	0.007	13
PM ₁₀	24-hour maximum	--	80
	Annual average	--	23.1
PM _{2.5}	24-hour maximum	--	71
	Annual average	--	10.5

Abbreviations: $\mu\text{g}/\text{m}^3$ - microgram per cubic meter

CO - carbon monoxide

O₃ - ozoneNO_x - nitrogen oxidesPM₁₀ - particulate matter at 10 microns or smallerPM_{2.5} - particulate matter at 2.5 microns or smaller

ppm - part per million

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

Cannon Road Construction Modeling

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = VOLUME
EMISSION RATE (G/S) = 1.00000
SOURCE HEIGHT (M) = 5.0000
INIT. LATERAL DIMEN (M) = 409.3000
INIT. VERTICAL DIMEN (M) = 2.3300
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = .000 M**4/S**3; MOM. FLUX = .000 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DI ST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.00	.00	.00	
100.	.0000	0	.0	.0	.0	.00	.00	.00	
200.	.0000	0	.0	.0	.0	.00	.00	.00	
300.	.0000	0	.0	.0	.0	.00	.00	.00	
400.	.0000	0	.0	.0	.0	.00	.00	.00	
500.	.0000	0	.0	.0	.0	.00	.00	.00	
600.	.0000	0	.0	.0	.0	.00	.00	.00	
700.	.0000	0	.0	.0	.0	.00	.00	.00	
800.	.0000	0	.0	.0	.0	.00	.00	.00	
900.	14.99	5	1.0	1.0	10000.0	5.00	439.50	48.07	NO
1000.	13.86	5	1.0	1.0	10000.0	5.00	442.75	51.64	NO
1100.	12.91	5	1.0	1.0	10000.0	5.00	445.98	55.06	NO
1200.	12.10	5	1.0	1.0	10000.0	5.00	449.18	58.33	NO
1300.	11.41	5	1.0	1.0	10000.0	5.00	452.37	61.47	NO
1400.	10.80	5	1.0	1.0	10000.0	5.00	455.54	64.50	NO
1500.	10.26	5	1.0	1.0	10000.0	5.00	458.69	67.42	NO
1600.	9.787	5	1.0	1.0	10000.0	5.00	461.82	70.25	NO
1700.	9.358	5	1.0	1.0	10000.0	5.00	464.93	72.99	NO
1800.	8.971	5	1.0	1.0	10000.0	5.00	468.02	75.65	NO
1900.	8.620	5	1.0	1.0	10000.0	5.00	471.10	78.23	NO
2000.	8.299	5	1.0	1.0	10000.0	5.00	474.15	80.74	NO
2100.	8.004	5	1.0	1.0	10000.0	5.00	477.19	83.19	NO
2200.	7.732	5	1.0	1.0	10000.0	5.00	480.22	85.58	NO
2300.	7.481	5	1.0	1.0	10000.0	5.00	483.22	87.91	NO
2400.	7.247	5	1.0	1.0	10000.0	5.00	486.22	90.19	NO
2500.	7.030	5	1.0	1.0	10000.0	5.00	489.19	92.43	NO
2600.	6.827	5	1.0	1.0	10000.0	5.00	492.15	94.61	NO
2700.	6.636	5	1.0	1.0	10000.0	5.00	495.09	96.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

881. 15.23 5 1.0 1.0 10000.0 5.00 438.92 47.40 NO

SCREEN_Vol Src. OUT
 DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 * SUMMARY OF TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
0.	1.	2775.

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	15.23	881.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

Appendix C

RTP and SCS Consistency Memorandum



MEMORANDUM

Date:	March 11, 2015
To:	Eric Lu and Joy Brooks, Environ
From:	Sohrab Rashid & Dale Domingo, Fehr & Peers
Subject:	Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) Consistency for the Agua Hedionda Specific Plan

SD14-0154

The proposed Agua Hedionda Specific Plan consists of 585,000 square feet of visitor-serving commercial uses, and an additional 175 acres of open space and agricultural uses. The Specific Plan proposes to develop the Specific Plan area with a 488,000 square feet (SF) regional shopping center; a 2,500-seat (51,000 SF) movie theater; a 46,000 SF supermarket; and, 175 acres of passive parks, agriculture uses, and habitat management preservation areas.

Senate Bill 375 (SB 375), enacted in 2008, requires each of California's Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) for inclusion in their Regional Transportation Plan (RTP) in order to lower greenhouse gas (GHG) emissions generated by automobiles and light trucks in their region. The San Diego Association of Governments (SANDAG) is the MPO for the San Diego region.

In response to the requirements of SB 375, the SANDAG Board of Directors adopted the 2050 RTP and SCS on October 28, 2011. The RTP and SCS is a long-range transportation plan that serves as a guide for achieving public policy decisions for a wide range of multimodal transportation improvements throughout the region. The SCS addresses GHG reduction targets adopted by the California Air Resource Board (CARB) pursuant to SB 375. CARB's targets require the San Diego region to reduce per capita emissions from 2005 levels by seven percent by 2020 and 13 percent by 2035. SANDAG's SCS is expected to result in regional per capita GHG emission reductions of 14 percent in 2020 and 13 percent by 2035; thus, the SCS will meet or exceed CARB's targets. In Executive Order G-11-114 (dated November 18, 2011), CARB acknowledged that SANDAG's RTP and SCS, if implemented, would meet its targets.



SANDAG's travel demand model was used to produce future year traffic forecasts as part of the RTP and SCS development process, and was used to evaluate the future GHG emissions under the RTP and SCS and determine attainment of CARB's targets. The SANDAG model reflects the forecasted population and employment for various planning years out to 2050, and the modeled land uses are consistent with the adopted General Plans of all 18 cities plus the County of San Diego within SANDAG's jurisdiction that were in place at the time of SANDAG's 2011 adoption of the RTP and SCS.

The SANDAG model has assumptions for land use for all areas within the City of Carlsbad, including the Specific Plan area. A review of the SANDAG model, utilized in connection with adoption of the RTP and SCS, identified the Specific Plan area's traffic analysis zone (TAZ) for the development of 50 acres of regional commercial, which would equate to approximately 653,000 SF when assuming a 0.3 floor-to-area ratio. Therefore, the proposed Specific Plan is consistent with and includes approximately 63,000 SF less land use than the amount included in the SANDAG model.

In summary, the Specific Plan's proposed land use development is consistent with the City of Carlsbad's General Plan land use designation used by SANDAG to develop its SB 375 forecasted development pattern in the SCS. Similarly, the Specific Plan area was identified for regional commercial development in the SANDAG model. Because the SANDAG model anticipated development of the kind and quantity proposed by the Specific Plan, and the model demonstrated achievement of the SB 375 reduction targets to the satisfaction of CARB, the proposed Specific Plan is consistent with the objectives of SB 375 and SANDAG's SCS.